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Reagan's thunderbolts of the future, Page 18

NEWS SUMMARY

GENERAL

Gromyko absence 'a ploy' says U.S.

U.S. officials in Washington believe the decision by Soviet Foreign Minister Andrei Gromyko to cancel his trip to the United Nations General Assembly in New York is a propaganda ploy and a sign of Soviet embarrassment after three UN setbacks.

Senior State Department officials say there is no diplomatic or political substance to the Soviet decision.

Mr Gromyko will be missing a General Assembly session for the first time since he became Foreign Minister in 1957. The decision follows the U.S. withdrawal of landing rights for the Soviet airline Aeroflot in the wake of the Soviet shooting down of the South Korean jet. Page 2

British Socialist Euro-MP Richard Caborn is to ask the European Community foreign ministers whether the UN headquarters should be moved from New York to a neutral country.

Swiss buzz airliner

Swiss military aircraft intercepted a Bulgarian airliner which entered Swiss air space without prior notification – and allowed it to continue its flight from Bratislava, Czechoslovakia, to Brest, France.

Pakistan to protest

Pakistan says it is to protest to the United Nations after Afghan jets dropped eight bombs on a village near Peshawar, killing one man. Page 2

China admitted

China was admitted to the World Energy Conference in New Delhi after a three-hour debate by delegates.

Spacecraft burns up

Soviet cargo spacecraft, detached after servicing space station Salyut-7 for nearly a month, burnt up in Earth's upper atmosphere.

Black Miss America

Vanessa Williams, Miss New York, aged 20, a theatre student, was chosen as the first black Miss America in 62 years of the contest.

Mao's final years

Mao Tsetung's final years were marked by a "devilish change" in the Chinese leader, caused by a brain disease, says veteran U.S. political writer Theodore White. He has been in touch with aides of Mao.

Convicts at large

Twenty-five of the 38 convicts who escaped from Tournai prison, Belgium, during a warders' strike on Friday were still at large last night.

'Hijack' escape

Nine Poles who fled to West Berlin in a flying school biplane avoided being shot down by Soviet fighters by saying the aircraft had been hijacked.

Ulster supergrass

Scientists in Ulster have produced a new supergrass, loved by cows, resistant to poison weedkiller paraquat, and which keeps down weeds itself.

Soccer sorcery ban

Swaziland's national football association has banned the use of witchcraft.

Briefly . . .

Italian and his German wife were killed when their car ran into a U.S. Army tank near Fulda, West Germany.

Three American climbers died on the Swiss mountain Matterhorn, and one is missing.

St Kitts-Nevis becomes independent from the UK today.

BUSINESS

China in Australia mine deal talks

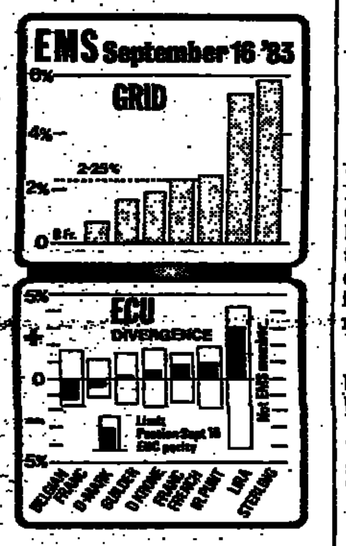
● CHINA is sending a team to Australia to take part in talks about taking a share in the iron ore operations of BHP, Hammersley, CSR and CRA, and about a partnership with Goldsworthy in opening a new mine. Page 3

● BANKS are still reluctant to resume lending to Brazil, even though the country has signed a letter of intent to the IMF. Page 21

● ARGENTINA and Paraguay have awarded a $1.6bn contract for work on the $10bn Yacyreta hydroelectric project on the river Parana to a consortium led by Dumez of France and Impregilo of Italy – but there are uncertainties. Page 20

● BRAZIL, normally a major exporter of soya oil and maize, is in the world market for those commodities because of lower production and over-selling. Page 3

● THE BELGIAN franc continued to lose ground in the European Monetary System last week. It was fixed at its floor level against the French franc, despite repeated central bank support, giving rise to speculation that the Belgian discount rate may have to be raised



following an increase the previous week in the Dutch discount rate and West German Lombard rate.

The free-floating Belgian financial franc tended to diverge from the officially fixed convertible franc, with confidence undermined by threats of a nationwide strike by public service workers. It was also weaker against the D-Mark, which improved against the French franc in spite of modest central bank intervention.

The French unit remained comfortably within its cross rate limit against the D-Mark, however.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

● CHINA is talking this week in Geneva with representatives of the U.S., EEC, and Japan about joining the Multi-Fibre Arrangement. Page 3

● GENERAL MOTORS of the U.S. is planning to take on 8,300 workers in December for the launch of a new range of small, luxury front-wheel drive cars. Page 2

● AGA of Sweden, world's fifth largest industrial gas company, is postponing a share issue to raise about $32.9m from U.S. and UK shareholders. Page 22

● PIRELLI, the Italian tyre and cable group, reported net profits for the year ended April 26 per cent down at L18.8bn ($11.8m). Page 22

● SHORT BROTHERS, the UK state-owned Belfast aircraft maker, showed a £7.2m ($10.8m) operating profit in the year ended March, but recorded a £19m loss after interest payments and development costs.

U.S. and Syria move closer to direct conflict in Lebanon

BY PATRICK COCKBURN IN BEIRUT, LOUIS FARES IN DAMASCUS, ANATOLE KALETSKY IN WASHINGTON AND PAUL BETTS IN PARIS

THE U.S. and Syria moved closer to a direct conflict in Lebanon over the weekend as Damascus responded to the U.S. naval bombardment of artillery positions within Syrian controlled areas of Lebanon by threatening to shell U.S. naval vessels.

Syria yesterday ordered its troops in Lebanon to back up its decision on Saturday to allow them to return fire if U.S. ships repeated shelling of Syrian-held areas. Officials in Damascus said orders had been given "to return any shellings that aim at areas under the control of Syrian troops."

Meanwhile, as heavy fighting between Lebanese Government forces and Syrian-backed Druze militias continued into a third week, France was pressing for a UN peacekeeping force to be deployed in Lebanon. France says that a UN force would be a vital element in any possible solution to the conflict.

The U.S. has already given its 1,200-strong Marine peacekeeping force stationed near Beirut the right to call in "defensive" support fire from its naval forces stationed off the Lebanese coast, but reports from Washington yesterday quoted a marine spokesman in Beirut as saying that the weekend shelling was an attempt to silence guns which had also "endangered the lives" of Americans working in the Lebanese Defence Ministry and at the U.S. Ambassador's residence.

He said that the protection of the 12 U.S. warships and 90 aircraft stationed off Lebanon "extends to all Americans" in Beirut as well as the multi-national peacekeeping force and the U.S. diplomatic mission.

In the past the U.S. suggested that it would return fire only if its peacekeeping forces in Lebanon came under attack. But the marines now interpret their role as covering "all civilian and military personnel assigned to the Lebanese Government," Major Robert Jordan, the marine spokesman, said.

He also confirmed that the weekend shelling had been directed for the first time at parts of the country under Syrian control.

Gen Paul Kelly, Commandant of the Marine Corps, denied that there had been any escalation in the U.S. military role but added that it was essential for the U.S. to support the Lebanese Government in the current military crisis. It would be "close to criminal" to withdraw the marines at this critical point, despite the fact that their lives were in danger, he said.

There has been growing concern expressed in the U.S. Congress about the gradual extension of U.S. military activity in Lebanon. The weekend shelling is likely to put further pressure on President Reagan to define his military objectives more explicitly and may encourage the passage of resolutions under the War Powers Act which can demand such an explicit statement.

Mr Amin Gemayel, the Lebanese President, said that there was no need "for U.S. soldiers to die" in Lebanon but insisted that it was "very necessary" for the U.S. to continue to support the Lebanese army. He and the Druze leader, Mr Walid Jumblatt, could reach agreement on a ceasefire "within five minutes," if it were not for the fact that Mr Jumblatt was being prevented from negotiating by the Syrians, he added.

Continued on Page 20

British plan for EEC stresses need for competitive industry

BY JOHN WYLES IN BRUSSELS

A STRATEGY for future EEC development which gives top priority to achieving industrial competitiveness through Community-wide co-operation has been proposed by the UK. The strategy also calls for more effective policies on competition and energy.

The British ideas, which have been sent confidentially to other member governments, overlap with similar proposals circulated by France. Both documents will be referred to in discussions among Community foreign and finance ministers tomorrow as they search for agreements by early December on the reform of Community finances and the development of new policies.

The British strategy paper is both a political statement and an expression of priorities. Mrs Thatcher's Government hopes that it will be seen as a convincing demonstration that the UK is as interested in developing the EEC as in securing a fairer balance to its budget payments.

Nevertheless, financial preoccupations determine Britain's approach to the future. In choosing between Community or national action, the Community approach, it says, should suggest itself where "more can be achieved, or can be achieved more economically."

Sir Geoffrey Howe, the Foreign Secretary, is likely to point out to his colleagues tomorrow that the paper brings together many of the positions the British are already taking on specific policy issues. But it also contains evidence of some new thinking on industrial strategy which reflects the government's belief in deregulation and the need to administer competition policy so that the creation of larger and more efficient enterprises is not discouraged.

The Community's priorities for the next decade, says the paper, must be the development of an industrial sector able to compete with the U.S., Japan and the newly industrialised countries.

The UK believes the Community's contribution should be made by fostering a "concerted" approach to research and development; by aiding the removal of legal and administrative impediments to the formation of European companies able to compete in world markets; and by sponsoring co-operation in new technologies.

Many of the points made are common to the French approach, but the UK parts company on protectionism and industrial collaboration.

Whereas France wants new EEC tariffs to be raised in protection of infant, high-technology industries, the UK asserts that "the temptation to solve the Community's internal problems by increased protectionism should be avoided in all sectors of the economy."

The paper is also much less cautious than its French counterpart about the necessity of co-operating with the U.S. and Japan "on terms not of dependence but of fruitful exchange and innovative inward investment."

More predictably, the British stress the need for a Community solid fuels policy; for environmental action to eliminate lead in petrol; for a solution to acid rain problems; and for more determined action to open up the internal market and to remove non-tariff barriers.

On the external front, the UK is putting impressive emphasis on the need for the Community to speak with "a coherent voice – backed where necessary with a perceived willingness to act in defence of its interests."

As well as looking to the next decade ministers will return to more immediate problems tomorrow when they discuss the financing of the EEC and how to provide a permanent solution to the British budget problem.

Current British tactics are aimed at fending off proposals – such as Denmark's convergence fund – which are seen as inadequate, and at focusing attention on Sir Geoffrey Howe's proposal for a "safety net" on payments.

This is based on two principles: poorest member states should always receive more from the budget than they pay in and all other member states should have a ceiling placed on their total net contributions to the EEC budget. The ceiling would relate to national gross domestic product.

There is still resistance among others member states to this approach, but British officials are confident that it will succeed because it strikes a balance between the need to assure budgetary benefits to the poorest member states and the need to protect the others from having to make unreasonably large payments.

Details, Page 2

China calls for cut in SS-20 sites on border

BY MARK BAKER IN PEKING

CHINA has expanded its already tough conditions for a return to normal relations with the Soviet Union to include a reduction in the number of SS-20 missiles deployed in the Far East.

The Communist Party newspaper, People's Daily, said yesterday: "China has asked the Soviet Union to remove three hurdles in the way of developing relations between the two countries. One of the hurdles is the Soviet armed forces in the Sino-Soviet and Sino-Mongolian border areas, and that naturally includes missiles."

It is the first time China has publicly emphasised the missile question in the context of the normalisation talks, in which it is also demanding an end to Soviet backing for Vietnam in Kampuchea and the Soviet occupation of Afghanistan.

In the past China has only stipulated the general issue of Moscow's estimated 1m troops positioned along its borders.

The People's Daily commentary comes less than three weeks before the Sino-Soviet talks are due to resume in Peking – and only a day after the end of a visit to Peking by the Soviet Deputy Foreign Minister, Mr Kapitsa.

The paper said Mr Andropov's promise to "liquidate" and not move to the Far East any SS-20s dismantled after the Geneva talks was "a step forward, but inadequate."

It said the Soviet Union must "considerably reduce its missiles deployed in Asia" if it wanted to mend relations with China. Western defence analysts believe there are 106 SS-20s already positioned in Soviet Asia.

"By failing to limit and reduce the number of its nuclear missiles deployed in Asia. The Soviet Union is hardly in a position to talk seriously about serving the interests of world peace and those of mankind," People's Daily said.

Meanwhile, the Chinese Foreign Minister, Wu Xueqian, has further played down the significance of the week-long visit to Peking by Mr Kapitsa in improving the 20-year rift between China and the Soviet Union.

Wu said the talks with Mr Kapitsa had proceeded in a calm, frank and business-like manner, but he added: "We cannot imagine so many problems in Sino-Soviet relations could be solved overnight. It is inconceivable that all three obstacles could be removed at once."

Wu said proposals for the Chinese Premier, Zhao Ziyang, to visit the U.S. and for President Reagan to visit China were being discussed through diplomatic channels.

Observers in Peking expect Zhao to visit Washington towards the end of the year, and for Mr Reagan to make his first presidential visit to China early next year.

Wu welcomed recent signs of improvement in Sino-U.S. relations, including the U.S. Government's decision to liberalise the transfer of technology to China.

Asked about the triangular relationship between China, the U.S. and the Soviet Union, he said: "Sino-Soviet relations and Sino-U.S. relations are two things and they cannot be linked together.

"We are willing to maintain normal relations with the two superpowers . . . but the basis of our foreign policy is independence. We will neither cling to any big power, nor submit to pressure from any big power."

Investment suffers as HK$ falls to new low

By Robert Cottrell in Hong Kong

THE political uncertainty about the future of Hong Kong, which caused the Hong Kong dollar to fall on Saturday through the psychologically important barrier of HK$8 to the U.S. dollar, is now having a marked effect on capital investment.

The half-yearly review prepared by Sir John Bremridge, the island's Financial Secretary, forecasts a fall in private-sector spending this year on building and construction of 15 per cent in real terms, zero growth in private-sector spending on plant, machinery and equipment, and a fall of 1 per cent in real terms in gross domestic fixed-capital formation.

The review, which was published on Friday, may have contributed to Saturday's HK dollar slide, analysts said. Uncompromising remarks by Zhou Nan, an assistant foreign minister, last week on how China will act when Britain's lease over most of Hong Kong expires in 1997, was also blamed. Sino-British talks on the colony's future are due to resume on Thursday.

The Hong Kong dollar has lost a quarter of its value in the last 12 months. It fell sharply on Saturday in thin trading, losing 14 cents from its Friday close to end the morning session at HK$8.035. The level is a record low for the currency, which also fell to another record low of 66.9 on its trade-weighted index, a drop of 1.4 points.

Hong Kong's political worries have been biting deeply into the local economy since September last year, when Mrs Margaret Thatcher, the British Prime Minister, visited Peking. In that month, the Hong Kong dollar was trading at an average of HK$6.11, while its average

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ICI beaten by UK utility to new North Sea gas fields

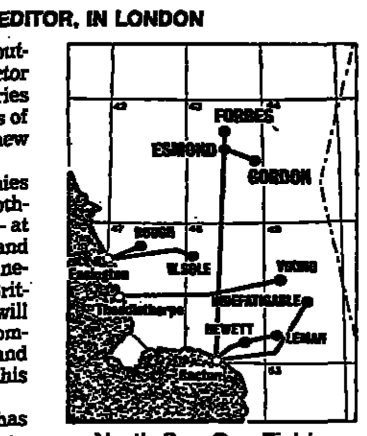
BY RAY DAFTER, ENERGY EDITOR, IN LONDON

BRITISH Gas Corporation has outbid the giant UK private sector group Imperial Chemical Industries (ICI) in a battle for fresh supplies of North Sea gas from three new fields.

A group of exploration companies led by U.S.-based Hamilton Brothers is about to exploit the fields – at a total cost of between £200m and £300m ($298m–$447m) – having negotiated supply contracts with British Gas. The supply deal, which will help to meet the corporation's looming shortfall in the late 1980s and 1990s, is expected to be signed this week.

It is the first time British Gas has faced serious competition from another potential buyer of North Sea gas. ICI bid strongly for the supply of gas from Hamilton's three fields, taking advantage of recently introduced legislation which stripped the corporation of its monopoly right of gas acquisition. ICI planned to use the natural gas (methane) for fuel and feedstock purposes in its chemicals complex at Teesside, northern England.

Industry reports suggest that ICI bid between 20p and 21p a therm for the gas, which would have been transported by pipeline directly to Teesside from the fields, about 150 miles to the east. British Gas is



North Sea Gas Fields

thought to have bid between 22p and 23p a therm.

ICI, which has traditionally bought its gas from the corporation, said at the weekend: "We believe that British Gas will continue as a major source of gas for ICI chemical plants for the foreseeable future. But we will be looking at all options and evaluate them as opportunities present themselves." It is thought that ICI is already considering bidding for other direct supplies of gas from the North Sea.

The deal is also novel in that it will open up a new area of the North Sea for development. The three fields – Esmond, Forbes and Gordon – were discovered in quadrant 43 on the Dogger Bank. They are the first commercial fields to be identified in that offshore area.

It is understood that British Gas has contracted to buy an average of 200m cubic feet a day, roughly the equivalent of 5.5 per cent of the current UK gas production rate (3.7bn cfd). Hamilton Brothers and its partners are planning a production system which will be able to deliver up to 335m cfd.

Under the development plans, about to be finalised, the three fields should be on stream in mid-1985, delivering gas through a 24-inch pipeline to the existing Bacton gas terminal on Britain's east coast.

The development will provide a much-needed boost to the UK steel industry and the offshore construction sector, for Hamilton Brothers believes it should be possible for at least 75 per cent of the orders to be placed in Britain. The project will include four steel platforms and interconnecting pipelines.

Under the proposals now being discussed with Energy Department officials Hamilton Brothers will in-

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North Sea oil price, Page 20

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OVERSEAS NEWS

U.S. unrepentant as Gromyko cancels UN assembly trip

BY ANATOLE KALETSKY IN WASHINGTON

U.S. OFFICIALS have dismissed the decision by Mr Andrei Gromyko, the Soviet Foreign Minister, to cancel his trip to the United Nations General Assembly in New York as a "propaganda ploy" and a sign of Soviet embarrassment after "three resounding defeats in UN arenas."

There was no political or diplomatic substance to the Soviet decision and no reason for the U.S. to regret it, senior State Department officials said over the weekend.

Mr Gromyko will be missing the annual session of the General Assembly for the first time since he became Soviet Foreign Minister in 1957. His decision follows U.S. refusal to grant landing rights to an Aeroflot airliner on which he intended to travel. The refusal of landing rights, in the wake of the Korean airliner incident last month, was formally taken by the governors of New York and New Jersey, who control the management of Kennedy Airport. But the State Department made clear that it did not object to the governors' decision in any way.

A State Department spokesman strongly denied Soviet allegations that the U.S. had refused to guarantee Mr Gromyko's safety and had violated its host country obligations under the UN charter. The U.S. offered Mr Gromyko the use of a military airfield convenient to New York instead of Kennedy Airport and saw "no reason for the Soviet decision".

A senior administration official told reporters that the real reason for the cancellation of Mr Gromyko's trip was probably the hostile reception he had received earlier this month from Western and non-aligned diplomats at the conference on European security in Madrid.

President Ronald Reagan meanwhile devoted his regular Saturday radio broadcast to a further condemnation of the Soviet Union's behaviour after the Korean airliner incident. "We can now stop pretending they have the same dreams and aspirations we do. We can start preparing for what John F. Kennedy called a long twilight struggle," the President said.

A spokesman for the UN Secretary General stated on Saturday that the U.S. denial of landing rights appeared to be a violation of the UN charter which "explicitly states that federal state and local authorities in the U.S. shall not enforce any impediment to travel" on the official participants at UN meetings.

Leadership talks start in Israel

By David Lennon in Tel Aviv

THE PROCESS of selecting an Israeli leader to succeed Mr Menahem Begin as Prime Minister moved into top gear yesterday as President Chaim Herzog began consultations with all the political parties.

On the basis of their recommendations, the President is expected by Wednesday to nominate the party leader who he believes has the best chance of forming a new coalition government.

The front runner is Mr Yitzhak Shamir, the Foreign Minister, who as the new leader of Mr Begin's Likud bloc has won promises from the parties in the current coalition to continue the partnership.

Iran threatens to close Hormuz Straits

Iran has again said it would close the strategic Straits of Hormuz at the mouth of the Gulf if its oil exports were threatened and has warned France against delivering five Super Etendard fighter planes to Iraq, Reuter reports.

The warning was issued by Majlis (Parliament) Speaker Hashemi Rafsanjani who said the delivery to Iraq of the Super Etandards, equipped with Exocet missiles, would make the Gulf unsafe.

The shipment of the jets, which was to have taken place last Friday, has been delayed

Afghan MiGs bomb Pakistan village

AFGHAN JETS flew into Pakistan yesterday and bombed a village near the border, killing one man and injuring another, Reuter reports from Islamabad.

The seven MiG 21 fighter planes dropped eight bombs on a village near Parachinar, 90 miles west of the north-west frontier province capital of Peshawar, according to Radio Pakistan.

St. Kitts independence

The Caribbean islands of St. Kitts-Nevis become independent today (Monday) from Britain as the Federation of St. Christopher and Nevis in a ceremony presided over by Mr Timothy Raison, Minister of Overseas Development, with the Queen represented by Princess Margaret, Our Foreign Staff writes.

French petrol price plan draws more fire

BY DAVID HOUSEGO IN PARIS

THE WAR between French oil refiners and the Government has widened with two major oil groups joining the battle.

M Hubert Jacqz, a president of BP France, said that BP would draw down on its oil stocks and review its investment programe in the light of the Government's plan to modify the formula determining petrol product prices.

He said the government's decision "paralysed all medium-term" planning and as a result BP would lose an extra FFr20m (£1.65m) a month on its refining operations.

Mobil France also expressed "grave disquiet" and said it would have "disastrous effects" on the financial results of the French refining industry.

In a stiffening of its anti-inflation programme, the Government has decided to freeze at the parity of FFr 7.7 for the rest of the year, the parity at which petrol prices are calculated. The dollar yesterday stood at FFr 8.10. The French refining industry made losses last year of FFr 12bn.

Officials privately admit that the government has underestimated the industry's reaction. Refiners are now pressing Paris for a reversal of the policy.

One of the Government's fears is that the industry could postpone new investment in cracking units which distil heavier fuels into the lighter products now in demand.

However, BP, which has already embarked on a new cracking project, said it would not be touched nor would the company's exploration programme. The review of investment would affect areas such as alternative energy supplies.

M Jacqz said the cut in crude purchases was being done in the knowledge that it would reduce BP's market share in France.

Britain urges 'fresh approach' to EEC

BY JOHN WYLES IN BRUSSELS

THE BRITISH Government is urging a relaunch of the EEC in a discussion paper to its Community partners. It calls for a "sustained effort" to agree on proposals already under discussion, together with "a fresh approach."

The Community's priority, it says, must be the development of "a vigorous, efficient and cost-effective industrial sector" able to compete with Japan, the U.S. and the newly industrialised countries.

The basic criterion for determining Community-level action should be "whether more can be achieved, or can be achieved more economically, by action on a Community basis rather than nationally." The target areas for action should be research and development, environmental pollution, transport, development of the internal market and "the reduction of the legislative and administrative burdens on industry."

Stressing the importance of cost effectiveness and economy, the Government says that since all expenditure derives from the taxable capacities of member states, "the allocation of these resources between Community and national expenditure requires us carefully to relate the one to the other."

Turning to industrial strategy, the Community must not be left behind in the development of new products "on which our economies will depend in the 21st century." A concerted Community approach to research and development "should avoid waste or duplication."

The formation of industrial units capable of competing on a world level is "a necessary adjunct" of Community co-operation, according to the paper. As a consequence: "The Community needs to examine critically the administrative and legislative impediments to such ventures and to risk-taking and investment.

The possibility of industrial co-operation between undertakings in member states should be further examined, says the paper. It cites new technology, particularly in the information sector, as an area where co-operation at a European level "can achieve greater effectiveness." But the paper also emphasises the need to "remain receptive" to the possibilities of strengthening relations with Japan and the U.S.

An energy strategy should aim to reduce dependence on imported sources of energy through the identification of priorities and the economic development of resources in the Community, says the paper. Britain welcomes participation by companies from other member states in the exploitation and production of North Sea gas and oil, and also calls for a solid fuels strategy able to develop a "viable industry by measures to encourage economic production and use of coal."

On the environment, British priorities are listed as the elimination of lead in petrol, Community action to control cross frontier transhipment of hazardous waste, and a search for solutions to acid rain problems.

The British Goverment puts all its weight behind the avoidance of increased protectionism.

Belgian strikes set to continue

BRUSSELS. — Belgian Government ministers were due to meet to discuss tactics after talks with unions failed to halt the outbreak of public sector strikes.

The strikes, hitting public transport, schools, ports and state broadcasting and postal services, looked set to continue in most sectors today, as union leaders consult their members on the latest government offer.

The government's plan, a mixture of demands and concessions over savings in the public sector pay-bill, was given a cool reception when presented to officials of the main union groups in negotiations which ended early yesterday.

M Roger Piton, leader of the Socialist public sector trade union, claimed that the Government was "systematically dismantling" the public sector and demanding "disproportionate sacrifices" from state employees.

M Charles-Ferdinand Nothomb, Interior Minister, rejected the charge, saying the Government's economy measures were vital for safeguarding the longer-term future of Belgium's public services.

The Centre-Right Government wants to reduce the public sector pay bill by $175m (£116m) next year as part of its efforts to limit the total budget deficit to $10bn.

The Government's latest plan calls for delayed payments of wages to state workers in return for guarantees that public-sector employment will be kept at last year's levels, and that bonuses will not be touched unless they are unusually high.

Meanwhile, most of the 38 prisoners who used the strike by their guards to flee from their jail in Tournai, 44 miles south-west of Brussels, remained at large yesterday.

Reuter

More workers for new GM small car

General Motors, the largest of the big three U.S. vehicle manufacturers, is planning to take on 8,300 workers in December, as it brings its new range of small, luxury front-wheel drive cars into production, Terry Dodsworth reports from New York.

Scheduled for launch in March, the new Cadillac, Oldsmobile and Buick models are expected to generate a total of 15,000 new jobs in the group

Bush in arms talks pledge

THE U.S. will continue arms talks with the Soviet Union for "as long as is necessary to achieve the reductions that all mankind really, truly wants," according to Mr George Bush, U.S. Vice-President, Ap reports from Bucharest.

At a luncheon hosted by Romania's First Vice President, Gheorghe Radulescu, Mr Bush deviated from prepared remarks to stress the U.S. willingness to negotiate with the Russians at the Geneva talks. Mr Bush arrived from Belgrade yesterday for a 24-hour visit.

He opened his meeting with President Nicolae Ceausescu on Sunday by handing the Romanian leader a letter from President Reagan. The contents of the message were not divulged. Neither made any formal statement at the start of their closed-door discussions.

Mr Bush said there had been a "frank-exchange" on Human rights, emigration and "a wide array of issues" at the meeting with Mr Radulescu and other Romanian officials.

Mr Ceausescu, the only Soviet-bloc leader who has taken no sides in the disarmament issue, has made a series of calls on Washington and Moscow to refrain from developing new nuclear arsenals, to reduce existing ones and to ultimately scrap them. AP

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Seveso prosecutor demands jail terms

MONZA – An Italian prosecutor has demanded prison terms of up to six and a half years for five managers of the Swiss-owned chemical plant which exploded near the town of Seveso in 1976, releasing a cloud of highly poisonous dioxin.

Prosecutor Nicolo Franciosi said the explosion at the Icmesa chemical plant was "more than an ecological tragedy, it was a serious drama for the entire local population."

The explosion released dioxin, a toxic substance, over a 1,800-hectare area. It killed animals, caused acute skin diseases and prompted a temporary evacuation of Seveso. Sig Franciosi said dioxin "anchors itself in the human organism without breaking down. Some scientists say it threatens a mutation of genetic factors and can cause cancer."

He requested jail terms of six and a half years for Mr Guy Waldvogel, former Icmesa chairman, Mr Herwig von Zwehl, managing director, and Mr Jorg-Anton Sambeth, technical director of the parent Swiss company Givaudan, a subsidiary of the chemicals multinational Hoffmann-La Roche.

He urged the court, also hearing compensation claims against Givaudan, to find the three men guilty of responsibility for a disaster, negligence over safety measures and criminal damage.

Icmesa plant designer Mr Fritz Moeri and engineering director Mr Giovanni Radice should be pronounced guilty of criminal responsibility for a disaster and sentenced to three and a half years each, the prosecutor said.

None of the defendants was in court to hear the prosecution wind up its case in one of Italy's worst ecological disasters.

Sig Franciosi accused the Swiss parent company of operating a "colonialist industrial policy" by producing the chemical trichlorophenol at the Icmesa plant in Italy.

They did so "because our country is one in which the public administration is more easily accessible and where industrial reality is less advanced than in other European countries," Sig Franciosi said.

During the course of the trial in Monza, the French Government discovered that 41 containers of dioxin-contaminated waste from Seveso had been secretly taken from nothern Italy to a dump in north-west France.

Hoffmann-La Roche later assumed responsibility for burning the chemical waste at its home base

Sig Franciosi said "It would be too easy to say the responsibility for what happened belonged to the workman who on the morning of Juy 10, 1976, manually closed the valve" on the Icmesa chemical reactor.

This interrupted the chemical process and caused an increase in temperature which led to the explosion.

"The fact is that nobody had talked about the dangers involved," he said, blaming Italian authorities for failing to keep up with technological processes.

Givaudan's attitude was also at fault "because they kept Icmesa labourers in the dark about the dangers," he said.

Givaudan has paid around $80m in compensation to Italian local authorities and individuals. Reuter

Australians offer China share in mining ventures

BY MARK BAKER IN PEKING

FIVE AUSTRALIAN mining companies have offered to the Chinese either a share in existing iron ore ventures or partnership in opening a new mine.

Officials of BHP, Hammersley, CSR and CRA have visited Peking to offer substantial shareholdings in their existing iron ore operations, and the Goldsworthy company has offered to start a new mine, according to Jing Shuping, director of the China International Trust and Investment Corporation (Citic).

A team from China's Ministry of Metallurgical Industry will visit Australia soon to discuss the offers, which Jing says could involve China taking a seat on the board of one of the companies. "There is a 49 per cent limit on foreign investment in Australian companies and foreigners are not allowed a management function, but a board position is a possibility," he said.

China is considering making an overseas bond issue of more than $30m (£20m) to cover the cost of investing in iron ore mining—*either in Australia* or Brazil—and to pay for internal development projects.

The Chinese see direct investment overseas as a way of securing long-term supplies of high-grade iron ore at stable prices, and of gaining experience in international dealing.

The idea of Australian investment was first raised publicly in March this year by Zhao Ziyang, the Chinese Premier. Jing travelled with Zhao on his official visit to Australia in April to discuss the issue with Australian mine companies.

The Australian Government is believed to be actively supporting China's interest.

Jing said that as well as the five Australian companies, a number of Brazilian companies had offered investment deals. There was argument within various departments of the Chinese Government over *whether it would be better to* buy into an existing mining company or invest in a new mine, and about how much should be invested.

Citic favours taking a 10 or 15 per cent stake in one of the Australian companies. Such an investment could be funded through "investment trust certificates" or bonds which China is considering issuing to Chinese living in Hong Kong, Macao and other places.

A first issue of between $30m and $50m was being contemplated, primarily to pay for internal projects.

Jing said China was keen to invest in a range of raw materials supplying companies overseas. There were plans for investment in Canadian paper pulp and also fertilisers in a number of countries.

Pakistan road order may go to Hong Kong

HONG KONG—A consortium of nine Hong Kong-based companies is expected to win contracts *worth $640m (£423m)* to construct a second carriageway for a 950-mile road from Karachi to Peshawar in Pakistan.

The Pakistan Government is expected to award contracts totalling $1.4bn early next month, according to Mr Toufiq *Ghulam Yasin, managing* partner of Traders and Contractors, a Pakistan company which expects to win contracts worth $160m on the project.

Finance for the project will involve raising two syndicated loans for a total of $1.1bn Mr Toufiq said. The Pakistan Government will provide $200m and the World Bank $100m.

National Westminster Bank plc is lead managing a $625m 17-year loan for the project, which is due to be signed in November, he added.

The companies in the Hong Kong based consortium are Anderson Asphalt, DSI, Elton-Arts Drafting Services, Hung Mau Construction Co., Kaer International, Marples Ridgeway, Maunsell Consultants Asia, Modern (International) Plant and Machineries, and Wilbur Smith and Associates. Reuter

Peking opens talks this week on joining MFA

BY ANTHONY McDERMOTT IN GENEVA

A SIX-MAN Chinese delegation will begin negotiations this week with representatives of the U.S., the European Community and Japan in Geneva over China's plans to join the Multi - Fibre Arrangement (MFA), which governs most of the world's trade in textiles and clothing. A bilateral textile *agreement was worked out with* the U.S. at the end of July.

The delegation, led by Qui Wen Ming, a senior adviser to the Ministry of Foreign Economy and Trade, arrived in Geneva last Wednesday, when it was thought that China's aim was to join the General Agreement *on Tariffs* and Trade. China was an original signatory to the Gatt in 1947, but its membership lapsed after the revolution.

On Friday the Chinese delegation had an hour-long meeting with Mr Arthur Dunkel, director-general of Gatt, at which Qui made it clear that China's interests lay in joining the MFA. The Chinese delegation will remain in Geneva for a fortnight talking to the main textile trading countries.

China has three main reasons for joining the MFA, rather than Gatt. Technically, Peking might have to pay back considerable arrears of Gatt dues dating back to 1950, and if it joined, the organisation would be required to provide more details about its trade than it is prepared, or even perhaps able, to do.

Third and most important, the current MFA expires at the end of July, 1986. China, as the world's largest producer of textiles, will want to have a say in how the next arrangement is worked out.

***Taiwan has announced the* lifting of an import ban on 594 items, mainly agricultural, petrochemical and consumer products, AP-DJ reports from Taipei.**

Mr Vincent Siew, director-general of the Board of Foreign Trade, said the *Government will liberalise im*port control on more products in the middle of next month.

More imports into the country would also help reduce the island's mounting foreign exchange reserves which currently stand at $12bn (£8bn), he added.

Brazilian soya and maize sales attacked

By Andrew Whitley in Rio de Janeiro

BRAZILIAN commodity traders will be in the soya oil and maize markets this week, not in their usual role as major exporters but as importers seeking to make up for worse-than-expected domestic harvests and over-selling in the first half of the year.

There is growing public criticism of the way in which Brazil, the world's second largest commodity exporter, sold the maize and soya in exceptionally large quantities when the world price was low and is now faced with the need to buy back when the price is high.

One leading Brazilian commodity trader sold 600,000 tonnes of maize to Spain at $90 a tonne earlier in the year, 50 per cent below the current market price. On a national scale, over $50m in potential export revenue has been lost.

In an effort to boost exports at all costs in the first half of the year, to improve the overall balance of trade and achieve the 1983 IMF-imposed target of a $6bn (£4bn) surplus, Brazil appears to have thrown normal market caution to the winds.

Latest soya shipment figures show the dramatic jump in this year's export volume gefore the Government clamped down at the end of August.

Soya bean shipments of 1.52m tonnes to mid-September were 250 per cent up on the same period last year, while soya oil shipments of 625,000 tonnes were 20 per cent up.

Wherever possible, the soya oil companies are likely to try to roll over 1983 export contracts into the next marketing year, commencing in February, rather than using up scarce foreign exchange to buy back soya products at prices much *higher than when they were* sold. But a certain volume of physical imports of soya oil is inevitable.

On Wednesday, the Brazilian Government formally authorised the import of syoa beans and products as well as maize.

In a parallel action, CACEX, the foreign trade authority, has blocked the export of an estimated 250,000 tonnes of soya oil.

The Agriculture Ministry estimates that Brazil will have to buy 700,000 tonnes of maize by the end of the year, costing $95m at today's prices.

Canute James examines the economic arm of Reagan's regional policy

Caribbean eyes U.S. free market

SEVERAL Caribbean countries, their economies depressed by reduced earnings from traditional exports, are hoping to take advantage of President Ronald Reagan's Caribbean Basin *initiative to increase* their trade with the U.S. over the next 12 years.

The Reagan initiative is designed to benefit politically favoured countries in the region. It offers beneficiaries 12 years duty-free access to the U.S. market for a range of *exports* excluding *such items* as textiles and clothes, footwear and other leather goods, petroleum products and tuna fish.

The plan is the economic arm of the Reagan Administration's Central American and Caribbean policy under *which it is hoped that by giv*ing economic assistance to the weak countries of the region, the U.S. will ensure internal stability and contain what it perceives as spreading Soviet and Cuban influence.

Nicaragua has been excluded from the initiative, but the 13 members *of* the *region's* English-speaking Caribbean Economic Community have asked the U.S. to ensure that all members be made beneficiaries after indications that two members, Guyana and Grenada, might be excluded because of ideological differences with Washington.

The Community countries argue that their own network *of preferential* trading could be affected if only some members are given duty-free access to the U.S. market.

The Caribbean request could increase the political problems which the Reagan Administration has had in implementing the plan. It was originally *intended to be carried out* jointly with Venezuela, Mexico and Canada, but the Latin countries withdrew. They have already given economic support to the region in the form of cheap oil and soft loans.

A Canadian parliamentary group concluded that Ottawa should be wary of the political motivations of Washington in planning the aid scheme. Consequently, Canada decided it would double its bilateral aid to the region and refrain from joining the U.S. plan.

The programme has taken 18 months to make its way through Congress, *slowed by objections from the U.S. labour movement* concerned about a flood of cheap imports from the Caribbean countries causing a further rise in unemployment.

The U.S. International Trade Commission and the Labour Department will carry out periodic reviews of the plan's operation and suggest adjustments for the protection of U.S. industry.

A decision on which of the 27 countries in the region will benefit from the plan is expected by November. Although several Caribbean leaders are regarding the 12-year one-way free trade facility as a possible salvation for their beleaguered economies, their ability rapidly to expand production for export is in doubt.

The smaller, less developed islands of the Eastern Caribbean are limited by a lack of infrastructure to expand output and there is no tradition of large-scale production giving the economies of scale needed for *successful competition.*

The region could also have difficulty in producing goods of consistently high quality to meet competition from U.S. domestic production, particularly in consumer goods. There is great potential, however, for an increase in exports of agro-*industrial products, such* as canned and processed foods, fruit and vegetables.

Local distillers are enthusiastic, as the aid plan removes the $1.62 per gallon duty on rum. The U.S. market has been supplied traditionally by Puerto Rico and U.S. Virgin Islands, which do not pay the duty, and last year shipped about 90 per cent of the 23m gallons which *the U.S. imported.*

Jamaica last year exported 497,000 gallons to the U.S., Barbados 85,000 gallons, the Dominican Republic 43,000 gallons and Haiti 13,000 gallons. All are hoping to get a greater slice of the market.

*The region's increasingly im*portant tourism sector also stands to gain from bilateral tax treaties with the U.S. available under the aid plan. The treaties allow U.S. business organisations to get tax credits for conventions which are held in beneficiary countries. State sponsored investment agencies are also planning to try to attract foreign owned companies from unstable central American states.

While countries such as Costa Rica, Jamaica and the Dominican Republic are likely to do better than others in taking advantage of the new opportunities, most countries are hoping to attract businesses supplying the U.S., but based in Asia, which want to relocate closer to their market and have access to the duty free provisions.

SHIPPING REPORT

Russians active in fixing tonnage to mid-1984

BY ANDREW FISHER

***DRY CARGO* markets shook off some of their lethargy last week and the Russians were active in fixing tonnage through to the middle of next year.**

Some rumours—thought by Denholm Coates and other shipbrokers to be exaggerated —put Soviet fixings at as many as 18 vessels. But they would anyway have dealt direct with East European owners, making the true figure hard to determine.

The Russians have been seeking ships either for trans-atlantic round trips or for trading through to June 1984. The tonnage has been either handy-size (25-40,000 dead-weight tons) or of the Panamax type (60-80,000 dwt and able to go through the Panama Canal).

In the tanker market, rates *stabilised during the week.* Owners are hoping that demand for tonnage will move up as winter approaches.

E. A. Gibson reported that there were more inquiries and fixtures out of the Middle East last week than had been seen *for some time.*

But since much of this business remains under wraps, the actual rate levels are difficult to establish. One 345,000 dwt cargo was arranged from Ras Tanura in Saudi Arabia to the U.S. at Worldscale 23.5, slightly down on previous levels. But there have been indications of other cargoes at higher rates.

Gibson also reported that the volume of laid-up tanker tonnage had fallen to 71m dwt in mid-September from 76m the month before.

World Economic Indicators

TRADE BALANCES

		Aug. '83	July '83	June '83	Aug. '82
Japan $bn	Exports	12.45	11.96	12.07	10.42
	Imports	10.08	9.66	10.99	10.46
	Balance	+2.37	+2.30	+1.08	−0.04
France FFrbn	Exports	64.5	59.2	60.3	52.6
	Imports	64.9	62.2	64.0	61.5
	Balance	−0.4	−3.0	−3.7	−8.9
		July '83	June '83	May '83	July '82
U.S. $bn	Exports	16.629	17.008	15.566	18.060
	Imports	21.950	21.024	21.514	19.849
	Balance	−5.321	−4.016	−5.948	−1.789
UK £bn	Exports	4.731	5.107	4.770	4.546
	Imports	5.081	4.945	5.276	4.380
	Balance	−0.350	+0.162	−0.506	+0.166
W. Germany DMbn	Exports	33.200	36.840	35.497	34.515
	Imports	31.030	32.923	31.869	30.784
	Balance	+2.170	+3.917	+3.628	+3.831
		May '83	Apr. '83	Mar. '83	May '82
Italy Lbn	Exports	8,245	9,002	8,496	8,933
	Imports	7,951	10,715	8,716	10,040
	Balance	+293	−1,713	−220	−1,107
Netherlands Flbn	Exports	15.502	14.796	15.390	14.560
	Imports	14.519	14.039	13.979	13.730
	Balance	+0.982	+0.758	+1.411	+0.830

Michael Donne looks at Rolls-Royce's development plans

Gambling on the rewards of progress

Fuel now accounts for 28 per cent of an airline's operating costs, and this figure is likely to rise. But to achieve a 1 per cent improvement in fuel economy in a civil airliner engine can cost £50m.

ON THE windswept expanse of the British Defence Ministry's test firing range near the mouth of the Thames, a new structure stands out against the skyline.

It is a giant gantry, from which is suspended a Harrier jump-jet fighter, and the sound of its engines echoes across the range as engineers from Rolls-Royce seek new knowledge to build into future generations of fighter aircraft.

Dramatic though it is, it is only a small part of Rolls-Royce's £400m ($596m) a year outlay on research and development, designed to keep the company abreast of the fierce and growing competition in the world of civil and military aero-engine business.

Of that spending, about £130m is Rolls-Royce's own money, and the rest comes from the Ministry of Defence or other Government departments for various civil and commercial engine programmes

With total world markets of £27bn for civil engines and a broadly similar sum for military engines forecast over the next 15 years – of which Rolls-Royce believes it can win about 20 per cent – the company's research and development activities are expanding.

The Shoeburyness facility is only part of one specific programme – designed to develop a supersonic version of the Pegasus engine in the Harrier jump-jet, which in turn can be developed into a supersonic Short Take-Off and Vertical Landing (STOVL) fighter for the 1990s.

In the big gantry, Rolls-Royce is testing an idea called "plenum chamber burning," or PCB, which is a means of burning extra fuel in the front nozzles of a Pegasus to get the big increases in power needed for *supersonic flight.*

It is part of a major venture in which both British Aerospace and McDonnell Douglas of the U.S. are also involved on the airframe design side.

Programmes of comparable scope are being undertaken in other engine fields. On the civil side, Rolls-Royce is now working on two new "demonstrator" engines, designed to help gain new knowledge to improve the fuel consumption of its big RB-211 engines, as well as to reduce noise.

One such demonstrator will run on the test-bed for the first time late this year, to test new ideas for the hot "core" of an engine. The other will run early next year, to test ideas for improved turbines and general propulsion efficiency.

The knowledge gained will be progressively built into new versions of the company's civil engines in the years ahead. The cost of these specific research programmes is not revealed, but Rolls-Royce says that to get only 1 per cent improvement in fuel consumption in a civil engine can cost between £20m and £50m in research.

The rewards are vast, however, for across the world's total fleet of over 5,000 commercial jet airliners, a saving of 1 per cent on fuel bills a year gives up to £100m savings in operating costs.

This search for cuts in noise levels and improvements in fuel consumption is paramount. Fuel now accounts for about 28 per cent of any airline's total direct operating costs, and this figure is likely to rise much further. Cuts in noise are not measurable financially, but are nonetheless vital to communities around airports worldwide.

Rolls-Royce has already improved fuel consumption in its new RB-211-535C engine, used in Boeing 757 airliners, to such an extent that when the advanced E4 version of that engine becomes available for service last next year, it will be at least 8.5 per cent better on fuel, and perhaps as much as 10 per cent better. On some short routes, the E4 engine may show as much as 13 to 15 per cent lower fuel consumption than the C version.

Much of the new knowledge stemming from these research programmes will be built into the new international aero engine – the IAE-2500 – that Rolls-Royce is now planning with Pratt & Whitney of the U.S., and engine companies in Japan, Italy and West Germany.

Another major feature of the Rolls-Royce research effort is to develop specific "cores" – the hot parts of any engine – that can each be turned eventually into a wide range of new power-plants.

Two such ventures now under way are the RTM-322, primarily a helicopter engine, and the RB-401, an engine for small business jet aircraft.

The RTM-322 is initially intended to power the new Anglo-Italian (Westland-Agusta) EH-101 civil and military helicopter. But the basic RTM-322 core can be used to develop both turbo-propeller and turbofan jet engines for small aircraft such as military trainers or executive jets.

The RB-401 as yet has no specific application, but it can be developed into small jet engines for both civil and military use, for example as an eventual replacement for the Adour engine which currently powers the RAF's Hawk trainer and light combat aircraft.

Both the RTM-322 and RB-401 could also have applications in ground-based industrial and marine roles.

The company has also become interested in "prop-fans" – big propellers looking more like those on ships than on aircraft – driven by new types of engine. Rolls-Royce has been discussing possible developments with propeller manufacturers and airframe companies.

Rolls-Royce is particularly close to Boeing in this field, passing on much of its knowledge to the U.S. company to incorporate into possible future airliner designs.

This work is still in its earliest *stages, but Rolls-Royce believes* that the savings in fuel by using a prop-fan could amount to between 20 and 40 per cent compared with today's jet engines.

On the military side, apart from the work on the Pegasus, Rolls-Royce is working on a derivative of the RB-199 engine (used in the Tornado combat aircraft) which may eventually be used in a new British fighter, the Agile Combat Aircraft (ACA).

This is a collaborative venture with the West German and Italian aero-engine industries, through the Turbo-Union company which builds the RB-199.

But at the same time, Rolls-Royce has an "advanced core military engine" (ACME) programme of its own under way, comparable to the "civil demonstrators" mentioned earlier, designed to widen its knowledge across the entire range of military powerplants.

Zimbabwe and the property of 'an enemy of the state'

BY JUSTINIAN

AMID the welter of comment about the acquittal and re-detention of the six Zimbabwean Air Force officers (two of whom were released so long as they left the country) little or nothing has been said about the powers of the Zimbabwean Government to confiscate the officers' property in the country.

Two years ago regulations were introduced after the Geriche-Varkevisser affair, when two members of the Zimbabwean police force, who had been acting as agents of the South African Government, fled the country and achieved immunity *from any criminal proceedings.* After their flight the Government discovered that people whom it regarded as enemies of the state could not have their property forfeited.

The gap was intended to be filled by the regulations, which give the Minister of Home Affairs the power to act against the property of enemies of the state. Such persons are defined as those acting as agent of, or on behalf of, or in the interests of a foreign country or organisation "in a manner which is prejudicial to the public safety of Zimbabwe, or which is subversive to the authority of the lawfully established Government of Zimbabwe."

If the Minister is satisfied that it is in the interests of Zimbabwe he may make a forfeiture order against such a person.

The constitutionality of the Emergency Powers (Forfeiture of Enemy Property) Regulations 1981 *is* being challenged today before the High Court of Zimbabwe in Bulawayo.

A white Zimbabwean, Mr Colin Bickle, who is a resident in South Africa, is asking the court to declare the regulations invalid for inconsistency with section 16 of the Declaration of Rights in the Zimbabwean Constitution, which is the product of the Lancaster House Agreement made in December 1979.

That section provides that no property shall be compulsorily acquired without prompt and adequate compensation. The only relevant exception is one that provides for the "vesting of any property belonging to, or used by, or on behalf of an enemy."

The case arose from the activities of Mr Colin Bickle in November 1981. Mr Bickle is a wealthy farmer who flew his private aircraft from the southern part of Zimbabwe to South Africa and back, admittedly committing offences against the Immigration Act and the Customs and Excise Act.

The customs offences involved export of firearms (which the Zimbabwean Government was in the process of having registered for *control purposes)* and the illegal import of 12 bottles of whisky.

The immigration offences involved transporting other persons in and out of unauthorised ports of entry and exit. He pleaded guilty and was fined by a magistrate.

He had also been charged with an offence, under the Official Secrets Act, of bringing into the country foreign agents from South Africa. He was acquitted of this charge on the footing that he did not know that either of the two persons he had transported from South Africa to Zimbabwe was a foreign agent or had been in communication with a foreign agent.

In the Zimbabwean Parliament the Minister expressed his astonishment at the outcome of the criminal proceedings. He said: "Mr Bickle went off with a fine – a man who illegally dealt in arms of war and at the same time flew enemies of the state.

"This man was engaged in illegal activites between Zimbabwe and South Africa and then the court makes the startling finding that he was unaware he was carrying spies in his aircraft. If you are engaged on a course of illegal activity, all illegal acts which flow from such a course are done with your full knowledge.

"It is, therefore, a reasonable inference that Bickle must have known that the two chaps he was carrying were enemies of the state."

Before this trial Mr Bickle had been detained and held incommunicado for 54 days. During that time he had been extensively interviewed by the police and special branch officers. No doubt on the basis of that information the Minister considered Mr Bickle an "enemy of the state" and ordered his property to be forfeited.

The crucial question before the court is whether, in the absence of any declared war between Zimbabwe and South Africa, a person who is a national of Zimbabwe can be an "enemy" within the meaning given to that word in the Constitution. It is a novel proposition that will arouse interest among lawyers everywhere.

Under the European Convention of Human Rights a government is entitled to derogate from most of the rights and freedoms guaranteed to individuals whenever there is a declared state of emergency.

Article 1 of the first protocol to the Convention protects persons against the deprivation of property, but in times of grave emergency threatening the life of a nation the protection drops away.

The convention was invoked by Turkey in its recent litigation with Cyprus and failed only because Turkey has not made a formal and public act of derogation, such as a declaration of martial law or state of emergency.

While there exists no armed conflict between South Africa and Zimbabwe, relations are anything but cordial. Zimbabwean ministers are constantly making public statements to the effect that South Africa is acting in a hostile manner towards Zimbabwe, and that activities by the South African security services are gravely prejudicial and designed to "destabilise" the security and safety of Zimbabwe.

Anybody, be he alien or national, who assists in that process of "destabilising" can, it is argued, properly be regarded as an enemy. Mr Bickle's lawyers assert that, whatever the state of affairs between the two countries, the absence of a declared war prevents anyone, especially a national, from being treated in that way.

STATISTICAL TRENDS: The USSR

USSR

Energy output sees noticeable decline

THE USSR has experienced two years of poor growth, with last year's performance worse than 1981. Although the first quarter of this year shows an upward trend, there is little prospect of a return to the years of high growth.

The official production statistics often contain glaring inconsistencies and gaps, but they do show quite clearly that the output of some of the economy's mainstays, especially oil, steel and coal, has either stagnated or declined.

The second half of the 1970's saw a marked slowdown in the growth of investment and productivity. The lower output return on capital, expressed in a higher incremental capital out-put ratio, and declining capital productivity is especially noticeable.

Abundant energy supplies have been a vital aspect of the USSR's economy. Oil also accounts for 60 per cent of its hard currency export earnings. The USSR remains the largest oil producer in the world, and seems likely to continue as a major exporter for some time. Despite this, there has been speculation about a Soviet energy crisis.

Oil production hasn't been rising as fast as expected from the newer Siberian fields, while the output of the coal industry has been consistently well below planned levels. The older coal fields are becoming less and less productive, despite increased investment. The newer existing and planned opencast workings in Siberia provide the only hope for increased production.

Natural gas, of which the USSR possesses the largest reserves in the world, is likely to be supplied in larger quantities to the other Comecon countries to replace cuts in oil deliveries. The oil can then be exported for hard currency. The earnings from natural gas exports to Western Europe are likely to be lower than expected because of lower consumption and prices.

Agriculture has become a high priority for the government, following successive bad grain harvests. Official figures have not been released for 1982, but import levels and a slight decline in livestock herds indicate poor results.

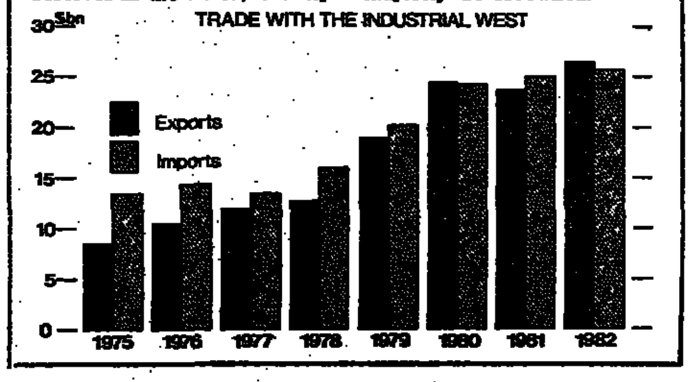
While economic grounds alone may suggest that the USSR continue or even expand its grain imports and concentrate investment in the energy sector, all the indications are that the government is unwilling to increase its reliance on food imports, for strategic reasons. Indeed, it hopes to reduce them.

Great stress is being laid on the agricultural programme, which could mean less investment being available for industry. The figures on capital productivity in agriculture show that so far capital investment has not yielded the hoped-for output results. Emphasis is being placed on better servicing and use of equipment.

The data on trade exports show the marked shift towards trade with the West during the last decade. However, last year's total trade turnover increased by 9 per cent, but trade with the West by only 6.8 per cent. Imports from the West hardly increased at all, while exports rose by over 9 per cent.

The USSR and other Comecon countries have been steadily increasing their investment in the OECD countries. The USSR accounts for over a quarter of these investments, and almost all of these are either fully or majority Soviet-owned.

Commentary by Our Economics Staff: data analysis by Financial Times Statistics Unit; charts and graphs by Financial Times Charts Department.



General

GROWTH RATES
% Change Over Previous Year

	1978	1979	1980	1981	1982
National income	4.0	2.0	3.8	3.2	2.6
Industrial production	4.8	3.4	3.6	3.4	2.8
Labour productivity					
Industry	3.6	2.4	2.6	2.7	2.1
Agriculture	5.0	−4.0	−1.0	−2.0	6.0
Construction	2.0	1.0	1.2	2.0	2.0
Real per cap. income	3.0	3.0	3.5	3.3	0.1
Wages and salaries	3.0	2.2	3.2	2.1	2.8
Foreign trade t'over	10.4	14.0	14.0	17.0	8.4

Source: Official Statistics

OUTPUT OF INDUSTRIAL PRODUCTS
(million tonnes unless stated)

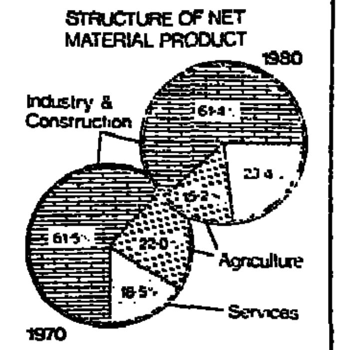
	1980	1981	1982
Electricity kwh/bn	1,295	1,325	1,366
Crude oil	603	609	613
Natural gas cu m. bn	435	465	501
Coal	716	704	718
Crude steel	148	149	147
Steel pipes	18.2	18.3	17.9
Synthetic resins and plastics	3.6	4.1	4.1
Chem. fibres	1.2	1.2	1.2
Metal cutting machine tools Rbn	1.949	2.045	2.068
Instruments, automation Rbn	5.4	5.6	4 8

Source: Official Statistics

FOOD AND CONSUMER GOODS OUTPUT

	1980	1981	1982
Meat tonnes m.	15.1	15.2	15.2
Dairy products	25.3	25.7	26.4
Leather footwear pairs m.	744	739	730
Cars and vans, units 000	1,327	1,324	1,307
TV sets units, m.	7.5	8.2	8.3
Washing machines, m.	3.8	3.9	4.0
Motor cycles, m.	1.09	1.1	1.1

Source: Official Statistics



CAPITAL GOODS
Annual Changes %

	1971-75	1976-80
Fixed cap. formation		
Construction	6.3	1.2
Machinery and equip.	7.9	7.2
Output		
Building materials	7.7	2.4
Engineering	12.0	8.9
Foreign trade		
Exports	12.5	14.7
Imports	15.4	13.4

Source: ECE

INVESTMENT, 1976 PRICES

	GFCF Roubles bn	Average annual/annual change %	Ratio of GFCF/NMP
1971-75	98.2	6.8	29.1
Plan 1976-80	124.2	3.2	28.8
1976-80	126.7	3.9	29.4
Plan 1981-85	140.0	1.6	27.5
1979	130.6	0.7	29.2
1980	133.5	0.7	28.9
Plan 1981	140.2	2.2	29.3
1981	138.0	3.4	28.9

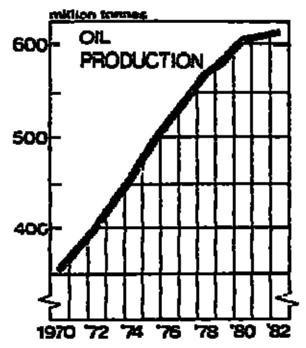
Source: Official Statistics

PRODUCTIVITY
Average Annual % Changes

	1971-75	1976-80
Labour productivity	5.8	2.8
Capital intensity	7.0	5.9
Capital productivity	−1.1	−2.9
Total productivity	3.7	1.1
Increment cap./output ratio	5.7	9.0

Source. ECE

Energy



OIL PRODUCTION
1,000 b/d 1982

USSR	12,200
U.S.	8,655
Saudi Arabia	6.484
Mexico	2,734
UK	2,050
China	2,020
Iran	1,896
Venezuela	1,826

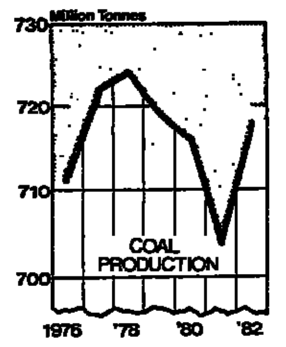
Source Oil & Gas Journal

Agriculture

NATURAL GAS PRODUCTION
bn cu.m.

1950	5.8
1960	45.3
1970	197.9
1979	407.0
1980	435.0
1981	465.0
1982	501.0

Sources: IEA, Official Statistics

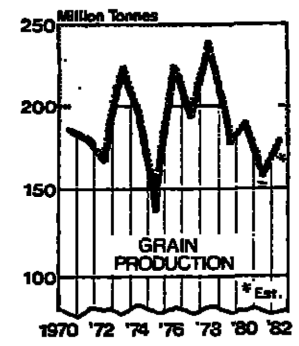


FIXED ASSETS AND PRODUCTIVITY
(1968-72=100)

	Per employee	Per hectare	Assets/output
1970	101.2	98.0	94.4
1975	160.8	154.0	143.7
1980	249.0	221.3	193.1

	Labour productivity % changes
1971-75	1.0
1976-80	2.8
1981	−2.0
1982	6.0

Source: ECE



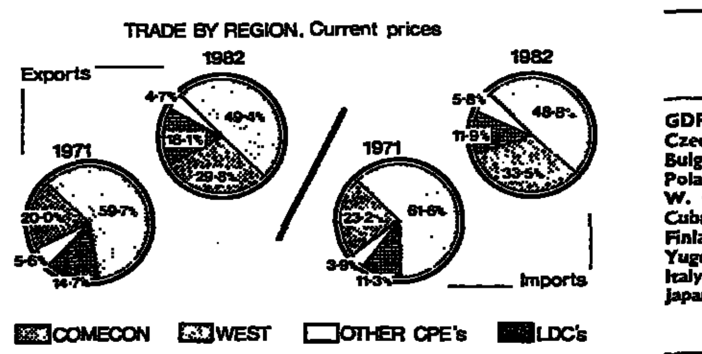
FOOD IMPORTS FROM NON CPEs
(U.S.$m)

	Total	Grain†	Other	Food imports % of Total imp.*	Food imports % of Energy exp.
1972	1,535	889	646	26.6	145.3
1975	4,322	2,528	1,794	24.6	83.0
1976	4,756	2,935	1,821	25.7	69.9
1977	3,803	1,457	2,346	20.6	46.9
1978	4,267	2,429	1,838	20.8	48.9
1979	6,540	3,538	3,002	26.0	45.7
1980	9,713	5,276	4,437	30.3	50.0
1981	13,469	7,559	5,910	37.7	65.6
1982	13,900	7,700	6,200	37.1	60.0

* Imports from and exports to non-CPEs. † Incl. sorghum.

Source. Wharton Econometrics

Trade



USSR'S TOP TRADING PARTNERS, 1982

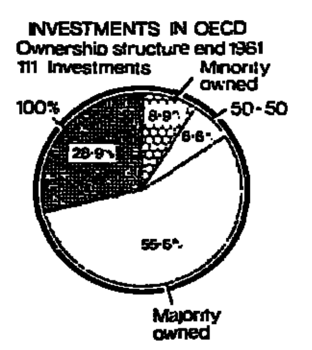
	Turnover % share	Balance Roubles m.
GDR	10.2	643.4
Czech.	8.2	315.6
Bulgaria	7.7	596.5
Poland	7.4	715.9
W. Germany†	5.8	1,152.3
Cuba	4.9	422.3
Finland	4.5	− 217.0
Yugoslavia	4.4	− 312.0
Italy	3.4	1,598.8
Japan	3.1	−2,169.2

† Incl. W. Berlin.

Source: Vneshnyaya Torgovlya

TRADE BY AREA
(R bn current prices)

		Turnover	Exports	Imports
Comecon	1981	52.2	28.6	23.6
	1982	58.7	31.2	27.5
Other CPE's	1981	5.7	2.6	3.1
	1982	6.3	3.0	3.3
Industrial	1981	35.3	17.2	18.1
	1982	37.7	18.8	18.9
Developing	1981	16.5	8.7	7.8
	1982	16.9	10.2	6.7
Total	1981	109.7	57.1	52.6
	1982	119.6	63.2	56.4



Portable pensions row comes out into the open

BY ERIC SHORT

THE DEBATE on personalised portable pensions came right out into the open the other day when protagonists faced each other for the first time at the Department of Health and Social Security conference to discuss the problem of lost pension rights for employees who change jobs.

Mr Norman Fowler, Social Services Secretary, as conference chairman, was not only able to listen to the arguments for and against portable pensions, but to note the strength of support for such a radical change and where that support came from.

The case for personalised pensions was put to the conference by Mr Nigel Vinson, of the Centre for Policy Studies. The concept of portable pensions goes beyond simply a means of solving the early leaver problem. It is that employees have freedom of choice in how they make their pension arrangements on top of that provided by the state.

An employee's pension rights are his largest single asset, larger even than his house. Mr Vinson, in the first place, wants the individual to be able to identify this part of his wealth, and then to have some measure of direct control over investing it.

Mr Vinson wants an employee to be able to identify his particular share in his company pension scheme, through a process of unitisation.

As a next step, the process would enable an employee, on leaving his job, to take his share of the fund and invest it either with the new employer's scheme or in a separate arrangement. The final step would be for an employee to be able to make his own pension arrangements outside the company scheme.

Mr Walter Goldsmith, director general of the Institute of Directors, goes even further in advocating unitisation of pension funds, claiming it to be the biggest opportunity to spread capitalism this century.

Professor Michael Beenstock of the City University Business School called for the Government to make a U-turn in pensions and bring back money purchase.

Lord Byers objected to personal pensions on the grounds of eroding the foundation on which the partnership had been created between state and private sector pension provision. His argument that portable pensions would be divisive was much more practical in considering portable pensions.

The arguments centred on the purpose of a pension arrangement. Various speakers from the pensions industry maintained it was to enable employees to have a defined level of income in retirement related to their earnings while at work. Then employees with equivalent earnings and service get equivalent pensions.

Under a portable pension concept, the individual is personally saving towards a pension. The ultimate pension will depend on how much he has saved and how successful he is in his investment. Employees with similar earnings and service patterns would finish with differing pensions.

Mr Tom Heyes, chairman of the National Association of Pension Funds, was scathing on suggestions that individuals on average could do better than pension fund investment managers.

The general argument coming from the pensions industry was that money purchase schemes Mr Vinson suggested were superseded by final salary schemes more than 20 years ago simply because they failed to provide adequate pensions, and this objection still applied.

The most bizarre objection to portable pensions came from Mr Colin Stewart of the Government Actuary's Department. He said that the EEC directive on equal status for men and women in occupational pensions schemes would, if adopted, debar the portable pension proposals or at least make them very complex to operate.

Shipowners likely to confirm tough line on pay rises

BY JOHN LLOYD, INDUSTRIAL EDITOR

TALKS between merchant navy officers and shipowners later this week are expected to confirm the tough line the owners will take on pay.

A meeting between the General Council of British Shipping (GCBS) and the National Union of Seamen (NUS) on Friday saw a claim by the union, which represents the 25,000 ratings, for an unspecified rise, together with improved overtime rates and extra holidays.

Mr John Kevile, the GCBS's chief negotiator, told the NUS that the offer – to be made on November 3 – would be "very modest."

He said: "The industry can afford nothing. The cupboard is bare. We will see where the priorities in the claim lie and see how we can best answer them."

The seamen's basic rate is £78 a week, but the large amounts of overtime worked brings the average for adult seamen up to £155 while on ship, and to £102 while on leave.

Mr Jim Slater, the NUS general secretary, warned the shipowners not to be influenced by the Government's 3 per cent pay target, saying there would be "serious trouble" if the offer were pitched too low.

The council has said that the economic position of the industry continues to worsen, and points to the 14 per cent of world shipping capacity now laid up.

● The industrial action by Britain's 38,000 workers in residential homes for the young, the infirm and the elderly is set to escalate this week.

The workers' union, the National and Local Government Officers' Association (Nalgo), has made official a strike by all its members in the Cleveland area, where one of them, Mr Ian Crampsey, was dismissed by the Labour-controlled council last week for refusing admission to a young person at the Broomlands Assessment Centre in Middlesbrough, where he worked.

The strike will certainly affect the centre itself, and is expected to close down a number – though not all – of the other centres operated by the council.

Mr John Kavanagh, the Nalgo secretary at the council, said: "This is a moderate branch, but our members were angered by the council's hard-line approach.

"We see it as an attack on a basic trade union principle to take action without a member being victimised."

The council is showing no sign of relenting on the suspension, and may make one or more further suspensions today.

Union split on BT privatisation

BY DAVID GOODHART, LABOUR STAFF

THE NEW leadership of the Post Office Engineering Union is involved in a difficult balancing act to fight against the privatisation of British Telecom (BT).

Yesterday's conference presented a confused picture of ideological commitment and creeping pragmatism which leaves the campaign against privatisation firmly in the hands of the executive but without a clear direction.

After the unexpected Left takeover of the executive – which it now dominates 14–9 in a mirror image of the old Right domination – a radical campaign of industrial action was expected.

Many of the new executive members were, after all, those on the Left who had been chiding the old executive for its failure to exploit the considerable, if occasionally exaggerated industrial muscle of the union.

Selective industrial action has been taken against privatisation and after yesterday's loose mandate from conference further action will start again during the next few weeks.

Even the new Left, however, with its own hard and soft factions, no longer appears to believe that it can stop the Government's privatisation plan.

The union membership remains cautious and pragmatic and while a majority probably opposes privatisation, for fear of losing a relatively high place in the pay and conditions league, its widespread commitment to taking action must be in doubt.

Indeed, a more cautious attitude is now evident from the number of branches representing 48,000 members who in effect voted against any generalised industrial action.

There appears, since the general election, to be a growing mood in favour of using action only against specific consequences of privatisation such as compulsory redundancy or the break-up of national bargaining.

That mood will be given strength by the slowness of many branches to pay the industrial action levy. The levy of £1 a week per member which ran for 10 weeks until early September has brought in only £750,000 compared with the £1.3m due.

A large number of members who have not paid in could go out of benefit in a few weeks' time, which could lead to a new wave of resignations.

About 2,000 members resigned following last year's industrial Day of Action against privatisation, and another 3,000 are still being disciplined for not joining the one-day strike.

Tory plan for House of Lords reforms

By John Hunt

PROPOSALS for the replacement of the present House of Lords by a mainly elected chamber are put forward in a pamphlet published today by the Bow Group, which now represents the young, middle-of-the road thinkers in the Tory Party.

The author, Mr Nicholas Paget-Brown, a 26-year-old business information specialist, warns of the damage that would be done if the views of a few unrepresentative Socialists were to lead to abolition of the Lords.

"It would, however, be equally damaging if the response from Conservatives was simply to do nothing," he adds.

He proposes a chamber with a voting strength in the region of 500. This would be made up of 300 elected peers, 150 to 200 life barons or baronesses, 24 bishops, two archbishops and three peers of royal blood.

Existing hereditary peers would also choose 35 of their members to have voting rights. But this would be only for the life of the peers chosen.

Hereditary peers would, however, still be allowed to attend debates although they could not vote.

Goldcrest aims to bid for television satellite channel

BY RAY SNODDY

GOLDCREST FILM and Television is to try to put together a consortium to bid for a direct broadcast by satellite (DBS) channel.

Mr James Lee, Goldcrest chairman, told broadcasters of his plan at the Royal Television Society's biennual convention at Cambridge.

He spoke the day after Mr Leon Brittan, the Home Secretary, announced an open competition for two DBS channels for independent television.

Mr Lee said he hoped to put together a consortium which would group "the British film industry" with several existing ITV companies.

"We are looking very actively into DBS as a method of distribution," said Mr Lee, whose company – a subsidiary of S. Pearson, which also owns the Financial Times – has already put together a premium movie channel for cable, including Home Box Office of the U.S.

In the past, Mr Lee had been critical of the cost of the BBC's DBS operation and has said it would lose a lot of money. Goldcrest is now more pessimistic about the speed with which cable networks will be set up in the UK and is looking into alternative methods.

Mr Lee believes the design of the BBC's Unisat satellite could be changed to provide five DBS channels on the "bird" instead of the existing two. This could more than halve the cost of each channel.

"This must be in the interests of the BBC and would be just what the film industry needs and wants. For the first time, we would have direct access to our own audience at home and a much-needed third force would emerge in the marketplace," Mr Lee argues.

Mr Nicholas Mellersh, chief executive of United Cable Programmes, a rival premium movie channel provider, says he will be reassessing the situation in the light of the Home Secretary's announcement, but thought it unlikely that UCP would go directly into DBS.

Mr Bill Cotton, managing director of the BBC's satellite operation told the conference that, whatever the short-term problems, in the longer term pay television would establish itself as a third method of financing broadcasting in the UK. He predicted 2m subscribers to BBC satellite programmes after five to six years.

But Mr Cotton and the BBC were roundly attacked by Mr Paul Fox, managing director of Yorkshire Television, and chairman of the Independent Television Companies' Association.

By going for a subscription service, the BBC, he said, was shattering a relationship with the licence-holder that had lasted for 60 years. The licence-holder would get the ordinary service and the pay-subscriber the four star golden service.

"The BBC is a wonderful public-service organisation, but it is totally ill-equipped for the hard realities of the commercial world," Mr Fox said. The BBC has approached DBS in the most expensive way possible, and the gamble could only be made because there were no shareholders to answer to.

Mr Fox, whose company, Yorkshire TV, is also believed to be interested in satellite television, warned the BBC: "If the gamble doesn't work, don't expect the Government to bail you out."

Liberals set for clash on Steel's leadership

BY KEVIN BROWN

THE LIBERAL PARTY last night moved firmly on to course for a major clash at this week's conference in Harrogate over the style and tactics of Mr David Steel, the party leader.

Mr Steel, emerging from a three-month break from politics, made clear his determination to fight off attempts to weaken his authority and to defend his vision of the Alliance, his party's relationship with the Social Democratic Party (SDP).

He warned dissident party members, particularly in the Association of Liberal Councillors, that they would have to accept the Alliance or leave the party.

He was immediately accused by his leading parliamentary critic, Mr Cyril Smith, MP for Rochdale, of "authoritarian leadership" and of letting the party down in negotiations with its partner.

Mr Smith said Liberal MPs were tired of not being consulted by Mr Steel, and he believed the party was in danger of being "walked all over by the SDP in the next four years."

In a television interview, he said: "David plays too much into the hands of the SDP and does not fight hard enough for the Liberal Party."

Mr Steel faces a challenge at the conference on several fronts: the appointment of a deputy leader, the removal of his right of veto over the election manifesto and greater access for party members to policy-making.

His veto is probably under little threat since he has made clear he would consider resigning if the conference votes to remove it.

He will be under strong pressure, however, to accept the appointment of a deputy leader for which Mr Smith, who claims the backing of at least three MPs, could be a candidate.

The deputy leadership will be the sticking point for Mr Smith and others critical of Mr Steel's leadership. They believe a deputy would give access to party decision-making at the highest level, to those suspicious of the SDP, and of its leader, Dr David Owen, in particular.

Mr Smith believes a deputy leader could act as a brake on Mr Steel, would remove some of the administrative burden from his shoulders and would improve the leadership's public impact.

Mr Steel tried to defuse the issue of joint selection, over which there has already been furious preliminary skirmishing. He said joint selection could have been a way out of local difficulties in some areas. But he went out of his way to stress that joint shortlisting ought to be satisfactory to the Liberal Party for both European and Westminster elections.

Mr Smith, however, repeated his view that the Liberal Party has every right to vote for joint selection.

He made clear he and others would urge delegates to insist on joint selection in both Liberal and SDP-led constituencies which could effectively wreck Mr Steel's hopes of Alliance co-operation

UK NEWS

Company will spur design by computer

By Nick Garnett, Northern Correspondent

A COMPANY to stimulate the use of computer-aided design and manufacture within British industry is being set up by a consortium of Cadcam suppliers, users and educational institutions with local authority systems.

The venture is being organised by the Cadcam Association, which has its headquarters in Middlesbrough, Cleveland, with the help of funding from Cleveland County Council and the EEC.

A centre for stimulating greater use of computers in designer manufacturing is being established in Middlesbrough with a separate company, to be known as Cadcam Applications Training Support, providing specific training courses for employees in companies expanding into Cadcam.

The association said: "The objectives are to help existing firms apply and use Cadcam effectively, and stimulate new growth by providing special facilities and support for start-up situations."

"There is a big gap between the technology which is available and the level to which it is applied in industry. The plans aim to close this gap."

BL expected to cut losses in first half

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

BL, the UK state-owned motor manufacturer, has sharply reduced *its losses during the first half of* 1983. Its half-year results, due to be published on Friday, will show a considerable improvement on the £143.4m ($213.6m) net loss during the same period of 1982.

There have even been same suggestions that BL Cars, which suffered a £37m trading loss in the first half of last year, actually did better than break even at the trading level.

Mr Harold Musgrove, chairman of the Austin-Rover volume car operations, said last week that his company was still on target to be "approaching break-even at the trading level by the year-end."

Also Jaguar has been very profitable so far this year. The company will produce 28,000 Jaguars in 1983, up from 22,000, and sell half of these in the U.S. where, because of the pound's relative weakness against the dollar, profits are high.

In Britain, where Jaguar will sell about one quarter of its output, volume in the first eight months increased by 9 per cent over last year, with 5,099 cars sold – without any discounting or special financial support for the dealer network.

The other element within BL Cars, Unipart, the spare parts operation, is believed to have remained profitable after some hard pruning to keep costs under control.

BL's black spot seems to be the Land Rover-Leyland business. But there are indications that the results from this division might not be as bad as suggested by recent events.

Only last month Leyland Trucks managing director Mr Les Wharton claimed the business was "literally fighting for survival" and that the recovery plan, involving the loss of 4,100 jobs last year, had stalled.

He also implied that Leyland Trucks was heading for a bigger loss than the £59m incurred at the trading level in 1982.

In July Leyland Trucks said it would cut over 400 more jobs at the Bathgate plant near Edinburgh, following 196 redundancies as part of the "recovery plan," and bring the workforce down to 1,900.

Mr Wharton maintained last month that Leyland Trucks' major problem was that exports to many markets had more or less dried up. For example Nigeria, where Leyland usually sells around 2,500 trucks a year, will take only about 100 in 1983.

Of the other operations within the commercial vehicle division, current indications are that Land Rover remained profitable despite the fact that the four-wheel-drive business faced the most difficult trading conditions in its history.

Freight Rover, the Sherpa van concern, is thought to have reduced its losses considerably, while Leyland Parts, the spares offshoot, was profitable.

OPINIONS SPLIT ON STOCK EXCHANGE FUTURE

Gilts dealers see trouble ahead

BY BARRY RILEY

AMID THE excited babble of discussion about the stock market's future structure by members of the London Stock Exchange, it is hard to discern any clear consensus view. Even within individual firms, opinions are often sharply divided, yet certain broad themes are emerging at this early stage of the debate.

Firms with a disproportionately large business in UK Government securities – or gilt-edged – are seen as being at the centre of the argument. This is because leading investment institutions are adamant that commissions on big bargains in gilts are much too high, and must fall sharply.

Ironically, this threatens Mullens, the Government's official brokers, as well as Pember and Boyle. Other big gilt-edged brokers like Greenwell, and Phillips and Drew, are also vulnerable, but such firms have taken care to diversify into equities and other activities.

Among the jobbers – the stock market's specialist firms of market makers who deal exclusively with brokers – the big two in gilts are Akroyd and Smithers, and Wedd Durlacher. Together they probably account for 80 per cent of the business.

It is in this area of the stock market that the Bank of England's influence on events will be most crucial. The Bank is happy with the present system of channelling gilts out through the jobbers as intermediaries, and using the Government Broker – Mullens' senior partner, Mr Nigel Althaus – as link man.

Some years ago the bank was influential in preventing the big merchant banks from setting up a rival gilt-edged dealing service through their computerised system called Ariel.

But now some leading gilt-edged jobbers and brokers are warning that the present system could not survive a collapse in the level of gilt-edged brokers' commissions. Moreover they do not see how a gradual transition to another system could be achieved.

It is therefore being argued that the Bank must either shore up the present arrangements, or devise a new system, probably involving a much wider range of approved dealers in gilts.

Many stockbrokers who have moved into the booming gilts market in the past 10 years or so are now preparing to shift back into other departments of their firms. Certainly, prospects are by no means so uncertain in the equity market.

The arrival of negotiated commissions will lead to cuts on the largest transactions, but clients can already reduce the effective levels through "continuation" of bargains grouped together over a period of time.

At the lower end of the scale, commissions on the typical size of bargain transacted by private clients are unlikely to drop. They *may even rise if brokers are no* longer willing to tolerate cross-subsidisation.

Those brokers who specialise in private client business therefore remain confident, and this includes most of the provincial or "country" brokers. One or two of these are even fancying their chances of entering the institutional market by offering cut-rate commissions for a bare dealing service.

The extent to which such "discount" brokers appear, in London, as well as in the provinces, is likely to be the key to changes in the structure of the equity market. But at all events, there is still likely to be a profitable place for the big broking firms like James Capel or Cazenove, which are strongly placed to offer research or dominate the new issue market.

Institutions will still be willing to pay relatively highly for services that they value. But they are much less likely to pay for second-rank facilities, and this will lead to a testing time for the numerous medium-sized general firms which have been sheltering under the umbrella of fixed commissions, but will have nothing special to offer in a more competitive environment.

Already, many broking firms are being very careful about their overheads, in the expectation that they will have to exist on the basis of a significantly lower level of income. And they are developing survival strategies which may depend on specialities such as sector research, private client services or computerised dealing facilities.

The big equity brokers, along with the jobbers, also face the uncertainties over the possible breakdown of single capacity – the rigid separation of broking and market making which is a special feature of the London Stock Exchange.

The Government and the Stock Exchange Council both officially hope that the separation of capacity can be preserved. But many people in the market believe in the so-called "Link" theory – that single capacity and fixed commissions are intertwined, and the former cannot be sustained for long without the latter.

Major brokers feel that to give an adequate service to their clients they will need, at least on occasion, to deal in securities on the firm's own account. At the same time, the jobbers will want direct access to investors, which at present they are denied.

But brokers, at present, lack both the capital and the dealing skills to embark upon market-making. Even London's most heavily capitalised stock market firm, jobbers Akroyd and Smithers, has a net worth of only around £40m, puny by international standards. Broking firms have much less capital than that.

London's firms continue to be protected from being swallowed up by much bigger British and international financial groups, because there are still severe restrictions on outside ownership – but these restraints may not last for long, especially if there is growing evidence of dealing in UK securities outside the stock market.

Stock Exchange members in the more attractive firms derive some comfort from the hope that they will be able to sell their firms dearly – *on the lines of the disposal of 30* per cent of Hoare Govett to Security Pacific, a West Coast American bank, last year.

But it could be that outsiders will seek a cheaper route into the London market by poaching individuals directly, rather than paying hefty goodwill for an existing firm's name. The big U.S. securities houses, for example, may well feel that they will be able to trade successfully in London on the basis of their own reputations.

In facing such uncertainties, Stock Exchange members fall into two distinct camps. Some agree with the decision of the Stock Exchange's chairman, Sir Nicholas Goodison, to seek the longest possible transition period.

This will allow brokers to preserve their income for as long as possible, and to explore future relationships in a relaxed time frame.

Others, however, view the prospect of creeping changes and prolonged uncertainty with something verging on dismay. It is argued that a "big bang" approach, with all changes in Stock Exchange rules taking place on a single day in the not-too-distant future, would allow firms to make rational plans.

Workers attracted by jobs in Falklands

Financial Times Reporter

KELVIN Catering, a subsidiary based in Paisley, Scotland, of Trusthouse Forte, has won a major contract from the Government's Property Services Agency to cater for construction staff building the Falklands air strip.

The first group of workers set sail for the Falklands at the end of this month to prepare the camp base for the initial consignment of a total of 1,400 construction workers involved in the project.

Job centres thoughout Scotland have already been inundated with applications for about 150 jobs, including cooks, chefs, cleaners and other ancilliary posts, offering salaries as high as £12,500 a year with food and board provided.

Kelvin Catering will manage the camp site, run two restaurants as well as providing hygiene, cleaning and laundry services, bars, a sports complex, a medical service and a number of shops and satellite canteens.

Mr Donald McFarlane, sales director of Kelvin Catering, said "We are absolutely delighted to have been awarded this contract. It was a great team effort."

● *OTIS ELEVATOR* has told union officials that its plant on Merseyside, which employs 1,200, is too large and must be reorganised. The company blamed a worldwide slump in building construction for a shrinking market for elevators.

● THE LIVERPOOL Dock Labour Board is seeking sanction from the national board for a further reduction in the number of registered dockworkers employed in the overmanned port. The national body has already authorised 209 voluntary redundancies during September. It has reopened the government-backed severance scheme of a tax-free £22,500 for men with 15 or more years' service.

● A THREE-YEAR, £600,000 contract to wash laundry for 13 hospitals in Surrey has been awarded to the Initial group. It is believed to be the largest contract awarded so far in the growing wave of government-inspired privatisation deals.

● DOCTORS have launched an organisation *to campaign for higher* taxes on alchohol as part of a new campaign against alcohol abuse. Action on Alchohol Abuse, which its backers want to be known familiarly as the Triple-A, is an initiative of several medical colleges, including the three UK Royal Colleges of Physicians and organisations representing most other branches of medicine.

● THE GOVERNMENT has been warned that it will not be able to continue to allow public spending cuts in adult education in face of "massive evidence of both need and demand" by older people for continuing study.

Adult education "will not remain in the shadows for much longer, whether under the present or any other government, of whatever political colour," said Dr Richard Hoggart, chairman of the Advisory Council for Adult and Continuing Education, in its annual report.

● CONSUMER demand for credit fell slightly in August, according to trade figures published yesterday. UAPT Infolink, which claims to be the largest credit information agency in the UK, reported that applications for credit facilities by consumers were down by some 2.9 per cent in August over the same month last year.

Lloyd's syndicate informed of inquiry

BY JOHN MOORE, CITY CORRESPONDENT

MORE than 500 members of Lloyd's who form an insurance syndicate under the management of Alexander Howden have been told that deals carried out by those that once managed the syndicate are under investigation.

The details of the latest investigation into the affairs of Alexander Howden are contained in the report and accounts of marine insurance syndicate number 868/35.

Auditors Futcher Head & Gilberts have said in their auditors report to the syndicate. "There are certain matters about which we have not been able to obtain all the information and explanations which are required."

The matter was first raised by Mr A. J. "Fred" Archer, the present professional Lloyd's underwriter who accepts insurance business on behalf of members of the syndicate. He requested an examination of certain syndicate reinsurance contracts which had been arranged some years ago. The examination has been carried out by Deloitte Haskins & Sells, the auditors to Alexander Howden Underwriting, the managing agents which run the syndicate.

Notes to the accounts say: "Further enquiries are being made in connection with these contracts and it may be some time before the final position is clarified. Any benefits that may arise out of these enquiries will be credited to the names (the members who form the syndicate)."

The problem has been referred to a special internal investigation at Lloyd's, headed by Mr Peter Millett Q. C. and Mr Nigel Holland, an accountant, which is probing a range of matters relating to Howden.

The Millett-Holland inquiry team is examining allegations made by Alexander & Alexander, Howden's U.S. owners, that $55m was misappropriated by Mr Kenneth Grob, Mr Allan Page, Mr Ronald Comery, Mr Jack Carpenter, and Mr Ian Posgate, former Howden executives, out of Howden's insurance syndicates at Lloyd's and other insurance interests.

The latest investigation, which has also been referred to the inspectors of the Department of Trade and Industry, who are also enquiring into Howden, centres around deals arranged by another former Howden underwriting executive.

Nalgo to meet SDP leader

By Our Industrial Editor

THE UK's largest white collar union, the 800,000-strong National and Local Government Officers' Association, will hold talks with Dr David Owen, the Social Democrats' leader, on the SDP's proposals for changes in industrial relations law.

The decision by the union's executive over the weekend will be hailed by the SDP as a considerable coup. Its initial approaches to the unions, publicised during the TUC's Congress in Blackpool earlier this month, were met with an apparently solid wall of hostility.

However, it has become clear that a number of unions believe that a refusal to talk will do their image more harm than good. Few have said they agree with the SDP's plans – which rely heavily on an extension of postal balloting to democratise union procedures – but many believe they should be seen to argue the case reasonably

Nalgo's decision bears added importance because of the union's size, its strength in key areas like local government and the gas and electricity industries and the position its general secretary, Mr Geoffrey Drain, occupies within the TUC.

Cutbacks at new Hesketh factory

LORD HESKETH, who opened a motorcycle factory at Towcester, Northamptonshire earlier this year to manufacture his new Vampire Superbike, has had to lay off five workers and cut back on production because plans to export to West Germany and Holland have been blocked.

A previous Hesketh motorcycle manufacturing company went into liquidation with debts totalling nearly £3m.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UK NEWS

New call to support youth training

BY ALAN PIKE

TWELVE prominent industrialists and trade union leaders have appealed for wholehearted support for the new Youth Training Scheme (YTS).

In a statement issued by the Industrial Society, the group said YTS offered young people a bridge between school and working life and a chance to gain skills, experience and opportunities.

The statement will be sent to the Industrial Society's 16,000 member companies – which employ about 8m people – with a checklist of action to ensure schemes are properly run.

The six industrialists who have signed the statement are Sir Adrian Cadbury, chairman of Cadbury Schweppes; Sir Richard Cave, chairman of Thorn EMI; Mr John Harvey-Jones, chairman of ICI; Sir Alex Jarratt, chairman of Reed International; Lord Pennock, executive chairman of BICC and Mr David Plastow, managing director of Vickers.

Union leaders are Mr David Basnett of the General, Municipal and Boilermakers Union; Mr Frank Chapple of the Electrical, Electronic, Telecommunications and Plumbing Union; Mr Terry Duffy of the Amalgamated Union of Engineering Workers; Mr Moss Evans of the Transport and General Workers Union; Mr Alex Ferry of the Confederation of Shipbuilding and Engineering Unions and Mr Roy Grantham of The Association of Professional, Executive, Clerical and Computer Staff.

Miners' leader begins campaign to save pits

BY DAVID GOODHART, LABOUR STAFF

THE BRITISH miners' leader, Mr Arthur Scargill, has sidestepped recent controversies on the Polish independent trade union Solidarity and announced a fresh campaign "to win the hearts and minds" of his union's members against pit closures.

Mr Scargill, president of the National Union of Mineworkers (NUM), claimed after a monthly meeting of the union executive to have received none of the expected criticism for his recent forays into international politics.

Indeed he immediately attacked what he called the news media's "scurrilous and unprecedented campaign against the NUM national president."

He added that the NUM did not have a policy backing Solidarity, "although we have supported it financially and support its existence as a individual union."

A statement from the executive, *however, suggests* that behind closed doors some members – almost evenly divided between left and right – were forcefully urging Mr Scargill to concentrate his energies on purely domestic problems.

The statement accepts Mr Scargill's report on his recent Moscow speech attacking President Reagan and the Prime Minister, Mrs Margaret Thatcher, his comments on the South Korean airliner disaster and his letter condemning Solidarity.

It continues: "We reaffirm our commitment to freedom and human rights in every country in the world. We condemn the scurrilous smear campaign and, in these most difficult times for Britain's mining industry, call on all sections of our union to unite and work together in defence of our pits and units – and our jobs."

Mr Trevor Bell, the general secretary of the NUM's white-collar section Cosa, said after the meeting: "We must now get back to doing a trade union job and leave politics to politicians."

Turning to the new campaign of meetings, leaflets and posters *throughout the coalfields,* Mr Scargill hinted at a slight shift in tactics.

While not ruling out the possibility of another ballot on industrial action against pit closures, despite two clear "No" votes in the last year, he said: "We are taking into account all other options available *to the union."*

If Mr Ian MacGregor, the new chairman of the National Coal Board (NCB) takes the widely expected hard line in pay negotiations, the union leadership may have to face the possibility of another ballot defeat on pay and closures. The union lodged its claim for a "substantial" increase in July and negotiations are due to finish in early November.

Mr Scargill said seven pits were currently threatened with closure. He named six: Cardowan in Scotland: Brynlliw in South Wales; Cadeby ind South Yorkshire; Lynemouth in Northumberland; Walstanton in Nottinghamshire and Cronton in Lancashire.

He was particularly critical of the NCB's decision to close two coke works – Fishburn in Durham and Coedely in South Wales.

He said Coedely had made a £3m profit in the past two years and that the decision proved that exhaustion and lack of profitability were not the real reasons for closure.

He added that 90 per cent of the 228 workers at Coedely had voted for a strike against closure and that "there is increasing spontaneous strike action in Yorkshire and South Wales because of the increasing pressure from the NCB."

Mr Scargill said nothing had changed in the industry as a result *of his apparently* amicable meeting on Tuesday with Mr MacGregor. He accused the Government of wanting to "butcher" the coal industry for political reasons and said that "despite a 5 per cent increase in productivity recently there had been substantial reductions in miners' real earnings.

He repeated his call for import bans on foreign coal and said that closing pits would cost almost twice as much as keeping them open.

Employers oppose EEC over plans to reduce noise limits

BY ALAN PIKE, INDUSTRIAL CORRESPONDENT

PROPOSALS to reduce industrial noise levels throughout the EEC are to be opposed vigorously by UK industry.

The Confederation of British Industry (CBI) is concerned that proposals in a draft directive from the EEC Commission could lead to huge increases in industry's costs and still fail to tackle some of the biggest problems of noise in the workplace.

A CBI conference this week will alert companies to the plan's "far-reaching and potentially costly implications."

The commission wants to harmonise occupational noise levels around a common maximum of 85 decibels. Most member states, including the UK, currently accept a maximum of 90 decibels.

CBI leaders accept the case for harmonising occupational noise levels throughout the EEC but do not believe the suggested reduction to *85 decibels is necessary. A CBI paper* on the draft directive argues that it "overstates the risk and yet ignores the area of greatest hazard" – those processes which lack any practicable means of noise control.

It says: "Some of these processes create the highest noise levels in industry and an urgent need exists for more government-funded research and development to help solve these intractable problems."

There is no evidence from industry throughout the European Community, says the CBI paper, that workers who are continuously exposed to levels of noise between 85 and 90 decibels suffer substantial hearing loss.

Costs of reducing noise exposure to 85 decibels would be "out of proportion to such benefits as may be secured," and there would be particular difficulties in transient workplaces like construction sites, docks and farms.

The paper says: "The requirements of the proposal will further endanger the viability of particular manufacturing processes or of whole companies, with adverse implications for employment."

Union representatives on the EEC's advisory committee on safety, hygiene and health protection at work have pressed for the early adoption of the draft directive and *the 85-decibel noise level.*

Costs of reducing plant noise levels to meet the draft directive would vary greatly within industry, but some preliminary examples which UK employers will be presenting to the commission include:

- A *major UK steelworks* would have to spend an estimated £55m to meet the existing 90-decibel norm, and £145m to get down to 85 decibels.
- A shoe factory employing 350 people would have to spend £300,000 to reduce machinery noise to 85 decibels.
- A cable-making factory employing 1,900 people would need to spend £500,000 to meet an 85-decibel limit.
- The cost of meeting a 90-decibel limit in a heavy chemical plant employing 100 people would be £1.5m, while a reduction to 85 decibels would cost £3.5m.

Call to alter small business policy

By Tim Dickson

THE UK Government is being urged to shift the emphasis of its small business policy from encouraging start-ups to helping businesses to survive and grow .

In a new critique published today the Association of British Chambers of Commerce (ABCC) also criticises the "wasteful duplication" of public and private sector resources used to provide advisory services for small firms.

"The solution to this problem is for the Government to start encouraging and supporting the work of Chambers of Commerce and, where appropriate, the approved enterprise agencies, since these are the only organisations with a country-wide network of adequate services and facilities to satisfy the needs of small firms," says the report.

"In some cases it would seem sensible for the Government to devolve (to chambers and enterprise agencies) some of the resour:es allocated to its own Small Firms Service, which has a much more thinly spread network of 12 regional centres and 80 area counselling offices."

The ABCC paper is intended to influence the Department of Trade and Industry's current review of small firms policy.

The review is designed to cut out some of the less effective schemes produced for small firms since 1979 and to improve the successful ones.

Meanwhile, the ABCC's focus on what commentators have called the advisory "jungle" comes when some chambers of commerce have been trying to improve their appeal to small firms.

They have been criticised for neglecting the needs of some of their *smaller members* – an explanation, some outsiders would say, for the proliferation of enterprise agencies

The ABCC argues that with their "unrivalled range of services" chambers ought to play a more expanded role.

The ABCC also calls on Government to reduce the heavy administrative costs of complying with Government bureaucracy.

- *Small Firms – Taking Stock. Copies from ABCC, Sovereign House, 212a Shaftesbury Avenue, London WC2H 8EW. Price £4.50.*

Westland asked to make new helicopter

BY LYNTON MCLAIN

WESTLAND, the helicopter manufacturer based in Yeovil, *Somerset,* is one of several companies approached by a private consortium to consider making a novel twin-rotor helicopter, with a potential market of between 1,000 and 1,500 helicopters a year worldwide.

The drawings, knowhow, patterns, *jigs and prototypes of* the helicopter were acquired by Rotorcraft International, a new company, from the liquidator of the Cierva Rotorcraft company, after the death of the helicopter's designer, Mr Jacob Shapiro.

Rotorcraft International was *formed by a group of private* entrepreneurs led by Mr Peter Welsford, a chartered accountant, and Mr John Brookes, a former director of Britten-Norman, the Isle of Wight light aircraft manufacturer, now part of Pilatus, the Swiss aircraft company.

The company outlined its aims at a presentation at the Royal Aeronautical Society in London. It wants to co-operate with other companies and groups in Europe and the U.S. to finance, design, develop, market and manufacture the proposed CXR Twin version of the original CR Twin helicopter developed by Cierva.

So far the company has appointed a helicopter designer, Herr Christof Fischer, who works for the West German Messerschmitt Bölkow Blohm aircraft company, as a consultant to complete the engineering design and development of *the proposed helicopter.*

The company has also appointed a market research company, Control Data Business Advisers, part of Control Data of the U.S., to carry out a market survey of the U.S. and Europe for the likely sales potential of the CXR Twin

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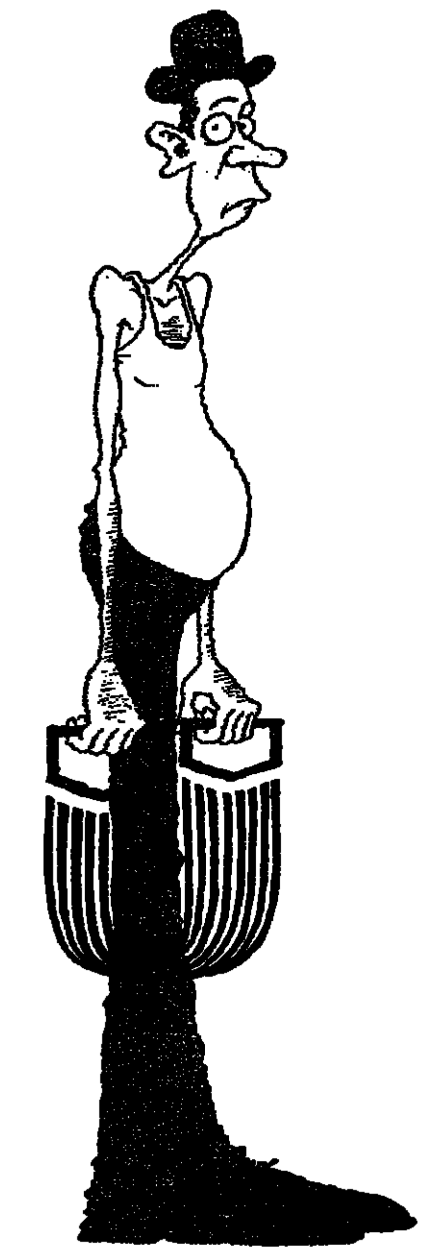

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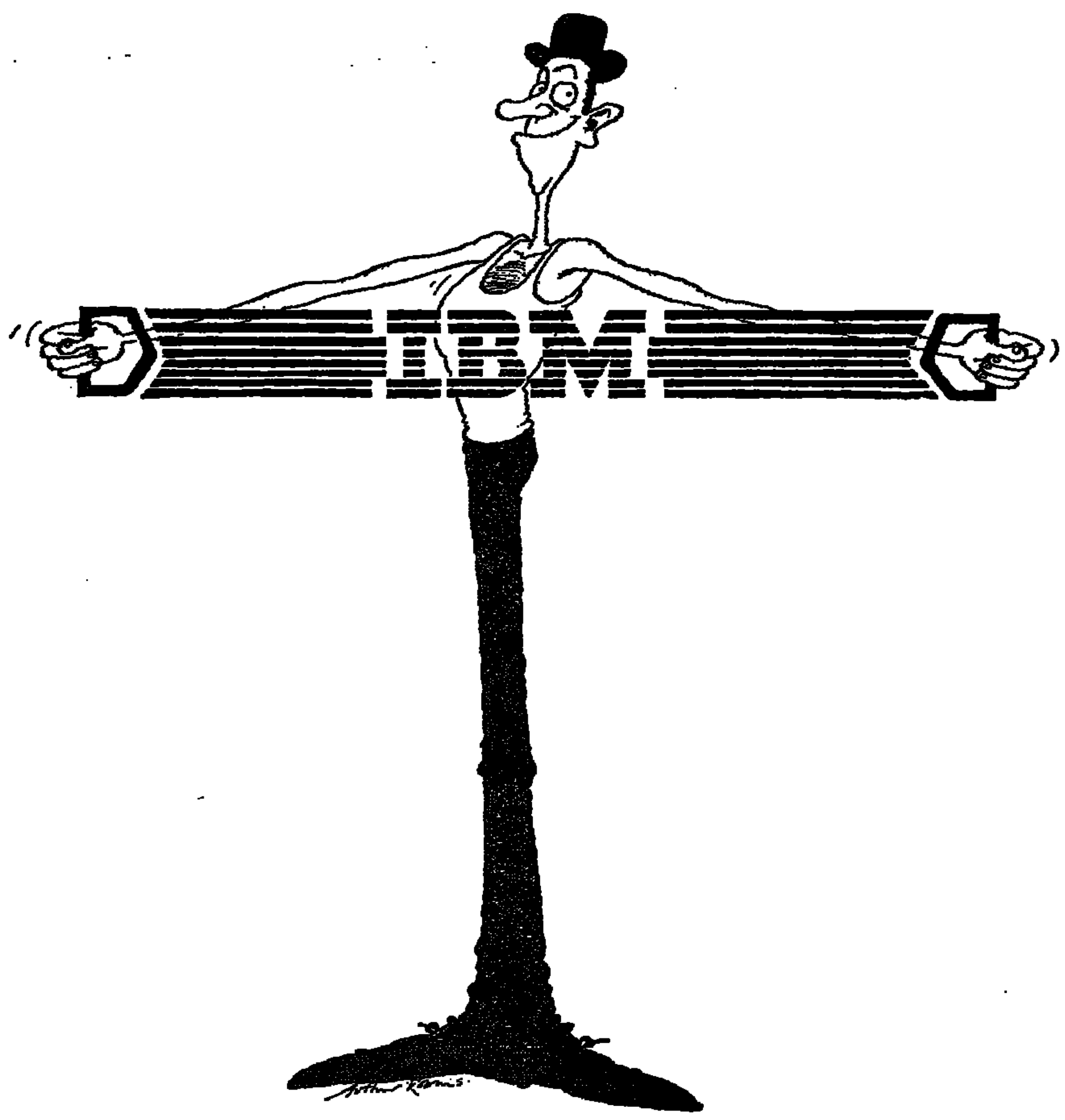

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BUILDING AND CIVIL ENGINEERING

Swedish hands across the Baltic

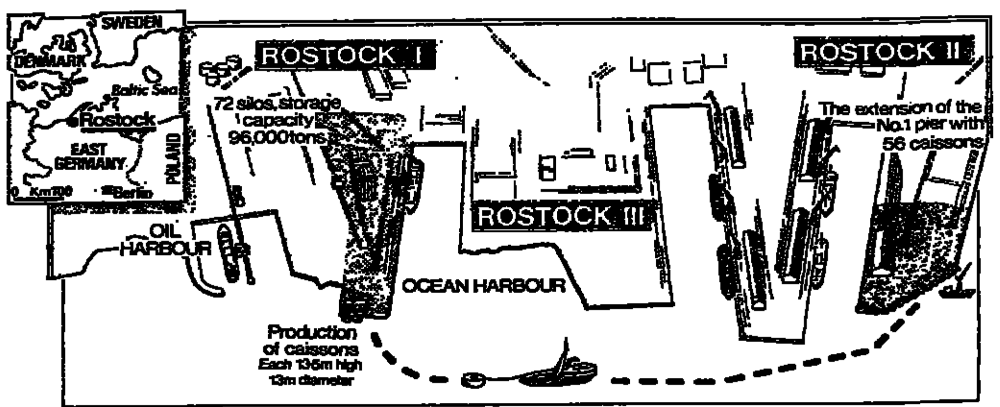
NOVEL CONSTRUCTION techniques developed by Swedish contractor Johnson Construction Company AB (JCC) of Stockholm are saving time and money in the current expansion of the East German port of Rostock on the Baltic coast.

The Rostock expansion programme is one of the largest construction projects in northern Europe at present and the only major port expansion project in Eastern Europe with a Western company as the lead constructor. It is also a vital project for East Germany's economy, designed to transform Rostock into the country's major international port by the end of next year.

JCC gained its first contract within the project, worth around SKr 379m (£32m), for building a grain harbour in 1979. Since then the company has won contracts for the remaining two stages of the project: a general cargo harbour worth around SKr 255m (£21.6m) and an export quay worth SKr 345m (£29m) to bring its total work value up to over SKr 1bn (£84.6m).

In placing the contracts, the East German client was looking particularly for the best possible compensation or counter-purchase deal it could obtain, and a construction proposal which could guarantee on-time completion with a minimum of imported materials.

JCC was able to meet East German compensation demands through the world-wide outlets provided by the Axel Johnson Group of which it is part. To meet the second requirement it proposed the use of innovatory techniques which have not only cut the hard-currency import requirement for the client, but also significantly shortened the planned construction time.



Port of Rostock: Caissons are towed from the construction site at the grain wharf to extend the piece goods quay

Instead of using sheeting and piling for the quays which had to be built, JCC proposed the use of caissons to be prefabricated in a special plant on site, while for the compaction of the harbour bed the company proposed a method which was entirely its own development — Vibro-Wing compaction.

Overall some 25,000 sq metres of the harbour area consists of washed-in sand to a depth of between four and eight metres. To enable this to serve as the foundation of the harbour some method had to be found to compact it. JCC's Vibro-Wing comprises a steel rod fitted with a number of protruding vanes. This is forced down into the sand with the aid of a vibrating ram which vibrates the rod as it is withdrawn. The process compacts the underlying surfaces accurately to the depth required.

The factory for the slipform building of the reinforced concrete caissons, each weighing about 900 tonnes and with 300mm thick walls and an 800mm thick base, was erected about 1km from the quay at the water's edge. The factory produces two caissons a week which are floated into the water and then towed to the quay site to be sunk into position by admitting water which is then replaced with washed-in sand.

The first contract involved expanding Rostock into one of Europe's largest grain handling ports with a capacity of 3.2m tonnes a year and a handling time of 2,200 tonnes an hour. Around 100,000 tonnes of grain can be stored in a battery of silos with some 72 cells. The facility is designed to enable ships to discharge either directly into the silo building or into railway wagons on the quayside.

JCC started work on the contract two years ago and completed it on schedule earlier this year, including the installation of track and signal boxes and processing equipment like suction dischargers, conveyor belts and transshipment tower. The transportation system also includes a 60 metre high machinery shed which distributes the grain to trackside containers or railway wagons. The wagons can be loaded at about 50 an hour.

The second stage, the general cargo harbour, involved lengthening an existing quay by 1,060 metres, made up of a sheet-piled quay 220 metres long and a caisson quay 840 metres long. In all 56 caissons will be used, each 14.1 metres high and 15 metres wide. The water depth at the quayside is 12 metres and the crane track on the quay will take cranes with a span of 10 metres.

By using its caisson approach JCC has built the 800 metres quay in 24 weeks—a rate of 33 metres a week. The construction time for a conventional sheet-piled quay is around 15 metres a week. As a result JCC will be handing over the general cargo harbour at the end of this month, two full months ahead of schedule.

This part of the project also includes a 25,000 sq metre storage area to be served by 50-tonne portal cranes with a span of 50 metres, a 13,000 sq metre transhipment hall, roadways, pipeline installations, transformer stations and discharge and materials handling equipment.

The third and final stage of the expansion, the export quay, started in April of this year and is due for completion at end 1984. But with the successful completion of two-thirds of the overall project JCC is now actively looking at other similar projects in Eastern Europe and, particularly, at the planned expansion of the Soviet port of Tallin.

TOM SEALY

Harrisson pads up for some overseas tests

PETER HARRISSON, newly-appointed managing director of Herbert Morris, Loughborough-based cranemaker, is a keen pace bowler, not afraid of delivering the occasional bouncer.

His principal target at present is the "invisible trade barriers" subtly erected by the international labyrinth of design of design and safety standards.

In recent weeks for example, he has had to play host to a three-strong team of German inspectors while hearing of British authorities imposing a mere £100 fine on a Far-Eastern company whose faulty hoist injured a worker.

Such lessons have taught Mr Harrisson that there is no point in complaining that the opposition isn't playing cricket, whca the rules have been changed to karate.

"The trouble is that British bureaucracy acts as an umpire, while the Japanese authorities act as part of the team," he says.

Since Mr Roger Kingdon moved on to Davy McKee, his youthful successor, still only 37, has reaffirmed Herbert Morris's commitment to a wide product range from 500 kg handchain hoists at the bottom of the scale to major electrical overhead industrial cranes capable of lifting three-figure tonnages.

Mr Harrisson believes that a broad range is the soundest strategy for an industry still deep in recession, despite moves by rivals such as NEI Cranes and AB Cranes, the Norcross subsidiary, towards specialisation or non-cranemaking activities.

In the past few years a dramatic redundancy programme, slimming staff from about 1,400 to 580, has been accompanied by a product development drive, aimed at replacing well-proven but heavy and expensive lines with new systems emphasising lower unit-costs, lighter weights and higher flexibility.

The old Litalift is now replaced by the "190-series," and a "400-series," encompassing variable drum sizes, has taken over from the traditional Ropemaster.

While the new lightweight hoists have boosted sales substantially, wresting back some market share from foreign rivals, such as Demag, Herbert Morris also claims to have strengthened its position in the heavy end of the business.

Four rubber - tyred yard gantry container cranes have been delivered to the Port of Felixstowe along with two large rail cranes for the port's Freightliner terminal. A pair of 120-ton cranes have also been supplied to the Heysham nuclear power station.

Nevertheless, Mr Harrisson accepts that if sustained growth is to be achieved the company must concentrate on export markets. Compared with 1973 when sales amounted to about £35m (at current values) the 1982-83 figures showed just £16m. This year the company expects to return to profit with sales of about £22m.

The problems of exporting do not amount simply to invisible trade barriers, however. "We have got to recognise the trend towards local manufacture and joint ventures," he says.

"In a few years' time countries like Saudi Arabia will not buy cranes from overseas."

Mr Harrisson believes that this fundamental change, particularly in the Midle East, towards home-industry purchasing policies means that companies like Morris must target sales at local manufacturers supplying and supporting prime industry.

Licensing deals, involving Morris products and expertise, will play a major role in the company's search for growth.

In the meantime, Mr Harrisson will press ahead with his predecessor's efforts to "flatten" the lines of communication between sales office and shop floor, continuing such innovations as allowing production staff to attend meetings with clients so that workers can see for t hemselves the pressures and demands needed to meet orders.

Peter Harrisson

More a Brearley than a Willis, the new skipper of Herbert Morris believes his apprenticeship at BTR has taught him that team spirit doesn't go out of fashion, whatever the ball game.

IVO DAWNAY

McCarthy to sell sheltered homes skills

THE RAPID growth in sheltered housing for the elderly has prompted McCarthy and Stone, the sector's pioneer developer, to market its own management service to other builders.

Estimates to be presented to a London conference next week are due to forecast a demand for at least 15,000 specially designed units with warden provision each year until the year 2000, for Britain's growing population of over 65s—expected to exceed 8m by the mid-1990s.

In the past five years only 2,000 sheltered houses have been built, 1,500 of these by McCarthy and Stone.

The company believes that this figure could be dramatically improved if conventional developers were able to contract out the long-term management responsibilities often demanded by local authorities, before planning permission is granted.

Currently, the major volume builders, such as Barratt and Wimpey, are moving strongly into the sector — the logical growth market after "solo" flats for single first-time buyers.

Peverel, MacCarthy and Stone's newly-formed sheltered housing management company, is likely to aim at middle-sized developers, tempted by the higher densities of sheltered accommodation and the low ratio of parking spaces to units required, but daunted by the commitments involved.

Sir Lawrie Barratt told the Financial Times last week that his company would resist buying-in housing management, preferring instead to use housing associations or alternatively residents' management committees, to oversee estate supervision.

Nevertheless, the Peverel package is likely to be attractive to many smaller developers, anxious to get into the market. The company estimates that its management fees could be reduced to about £60 per flat each year on blocks of 50 flats. This compares with housing association charges estimated by Peverel at about £110 per unit.

Charges to flat owners of about £300 a year would cover the employment of a warden, building insurance, heating, lighting and rates for communal areas and services such as window cleaning and grass cutting.

MIRA BAR-HILLEL

Replacing failed wall-ties

Reports that wall-tie failure is affecting some British properties built with cavity walls (both pre-and post-war) mean that home owners could soon be facing costly structural repairs.

Alternatives to the standard method of repair (usually inserting special bolts into the wall, which would probably cost up to £1,000 if the problem was discovered early elough) are offered by Renofors (UK) and Tyfoam.

Renofors (UK), a Lancashire company which specialises in conservation, claims to be able to repair an average sized house for about £200. The company says this is because it uses glass fibre bars bonded with epoxy resin to bridge the gap, and they are much cheaper than the steel bolts more commonly used.

For the higher price of about £1,000, the Tyfoam method provides support and insulation. It involves injecting polyurethane foam (developed by ICI) into small holes in the outer leaf to fill the cavity and bond endangered walls. The system is guaranteed for 30 years.

For further information, telephone Renofors (UK) on Bolton 58336, and Tyfoam on Swansea 467010.

KATRINA LOW

CONTRACTS

£10m Canadian embassy in Riyadh

An embassy with a Canadian flavour is to be constructed in the diplomatic area of Riyadh by LAING WIMPEY ALIREZA. Under a contract worth around £10m the embassy complex, which is being built for the Canadian Government, will provide a Chancery, ambassador's residence, and staff housing. The majority of materials specified will come from Canada. Construction is of reinforced concrete and blockwork with Canadian granite cladding to the main buildings and granite finishes inside public areas. Work has started with completion scheduled for November next year.

*

A Wimpey company, McNAMARA CONSTRUCTION, has been awarded a £2.5m contract for an earthfill dam and related works for a hydro-electric project in Newfoundland. This new dam will be at Bishop's Falls on the Exploits river and will replace the dam and power plant destroyed in February 1983 when, in the space of 24 hours, 380mm of rain fell, and the river rose 7.5 metres, washing away the old power plant and dam. McNamara will construct cofferdams out of till and gravel to divert the river and then excavate materials from the riverbed and banks and build a new dam.

£18m project in Glasgow

Developments Commercial and Industrial (Holdings) and F. J. C. Lilley and jointly to develop an £18m office and shopping project for Argyle Street, Glasgow. Piling for this development is already under way. At a cost of £700,000 two rigs each worth over £250,000 are on site to carry out the piling contract signed with Lilley Construction. The contract is for 120 piles each reaching over 100 feet below Argyle Street level to solid bedrock. The initial building contract of £7.5m has been placed with MELVILLE DUNDAS AND WHITSON.

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Why 'rogues' cause chaos

Arnold Kransdorff on the poor state of product recall procedures

HOWARD ABBOTT insists he is only being realistic when he claims that sooner or later every manufacturing company will produce a "rogue" product.

By that he means a product with some sort of dangerous defect, whether it be a "live" electric hair dryer which has been assembled incorrectly or an exploding light bulb that has a faulty component. Often these products evade quality control checks and slip through on to the market.

"It is a fact of life that any company that makes products in large numbers will get it wrong at least once, even though the product may conform to well-known standards, be approved by prestigious bodies and have been subjected to stringent quality tests," he says. "Even the great and the good get caught."

But, says Abbott, who is an expert on product safety, probably no more than 10 per cent of British companies with exposure to product liability have a formal management strategy to withdraw offending products from the market in a short time.

"Many companies have no systematic forward distribution plan because their sales network has evolved gradually over a period of time. In such circumstances, to try to put the distribution system into reverse can lead to chaos."

Because so few companies can do this efficiently, Abbott has written a comprehensive new management guide to product recall*, a step-by-step manual with which companies can draw up their own policy and programme to withdraw a product from the market before someone gets hurt and lawyers start knocking on doors.

Formerly engaged in research and development for Unilever, Lyons Bakery and, more recently, ITT's food and cosmetics group in Brussels, he is now managing director of Product Safety, a wholly-owned subsidiary of the Stewart Wrightson insurance group.

Any product recall plan should contain three main elements, he says.

The first of these is an ability to determine the seriousness of any defect and calculate the number of units that might be affected. This requires "a fully effective interlocking system of technical documentation."

"Products change in design and formulation throughout their life. Improvements, cost reductions, new regulations, raw material changes, alterations in suppliers' specifications, purchasing problems, wars and strikes can all play their part. Every change should be tracked so that the company knows exactly what they have in the field.

"When reports of a product defect start coming in a decision will have to be taken on its possible consequences. To do this requires completely accurate knowledge of the details of the product out in the market place."

The second main element of a recall plan is to be able to trace rogue products.

"Once a dangerous product defect has been confirmed the company must be able to identify exactly which units or production batches are involved. To do this an effective system of product 'finger printing' must be in force, for this is not something that can be done retrospectively; it has to be in operation continuously."

Only when these two elements are in place can the actual recall go ahead, he says. This can involve telephoning, telexing, writing to customers, advertising through the media or even sending teams of engineers around the country.

Direct costs include stock write-off, the expenses of contacting customers, corrective action such as repair, refunds or replacements and administrative back-up. Indirect costs include loss of sales, damage to the company's image, loss of production and any redesign or development expenses.

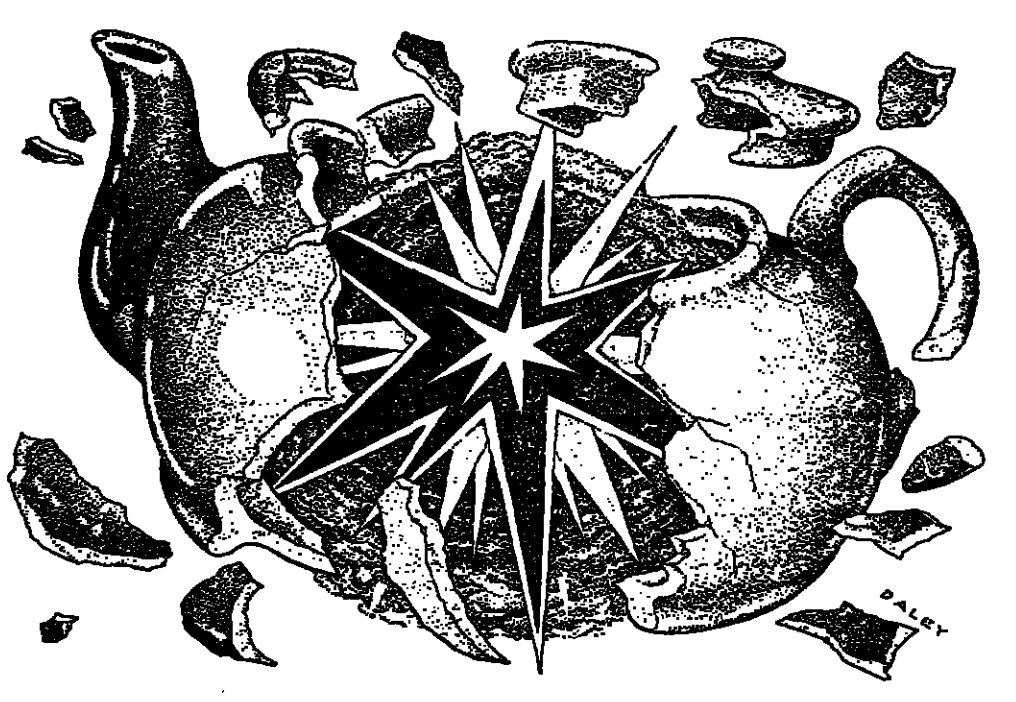
This list excludes the costs of possible court action if products cause injury or death. Abbott says that the maximum damages awarded in the UK for an injury to a single person was more than £400,000 in 1981—in the U.S. it is much higher.

Abbott points out that many companies are mistaken in their belief that all their product risks are covered by their product liability insurance.

He says that most product liability insurance has serious limitations.

Abbott says that while it is possible to extend cover to exclusions, there are few underwriters or brokers who get involved with this type of risk.

** Product Recall Management Guide, available from Product Safety, 5 Bridle Close, Surbiton Road, Kingston upon Thames, Surrey. Price £125.*



Public hazards and how some are handled

PAGING through Lloyd's monthly journal Product Liability International is like getting a preview of industrial armageddon. Among worthy articles on product safety, it publishes a disturbingly-long list of unsafe products which have been thrust upon an unsuspecting public.

From the U.S. it reports that users of a Texas Instruments home computer could be electrocuted by a potential defect in an electrical transformer. In the UK, dangerous asbestos fibres were being released from a particular brand of Spanish gas heater, while in Japan, injuries and deaths had resulted from defects in some industrial robots.

Doomsday looks even closer when one flicks through the list of dangerous products emanating from the food, pharmaceutical and transportation industries.

The journal reports that packs of artificial sweeteners in North Carolina have been found to contain a near fatal dose of a chemical used in water treatment. In the UK packs of imported herbal tea were contaminated with deadly nightshade.

Also, scientists in the U.S. had concluded that around 3m women were running the risk of serious infection by using an intra-uterine contraceptive device sold under the label Dalkon Shield.

Defects in road vehicles were particularly numerous. The February issue alone carried reports of potential faults in nearly 500,000 General Motors cars, 100,000 Renaults and 600 Suzuki motorcycles.

In each case the product was withdrawn from the market—at often enormous expense to the company which made it.

The well-known example of John West, which had a mass recall of its canned salmon in 1978 and 1982 because of botulism scares—three people died—cost Unilever, the parent company, an estimated £2m, according to industry sources. In 1978-79, the recall of 90,000 potentially dangerous electric razors manufactured by Remington cost the company around £500,000.

On a larger scale, the Firestone company recalled 7.5m radial tyres in 1978 because of a dangerous defect; its estimated total costs for the exercise amounted to a hefty $150m. The following year Corning Glass recalled more than 18m of its coffee makers because a sub-standard adhesive was making handles fall off; the company estimated the total costs of the recall at $17m.

Often attempts at recalls have a low success rate. In 1979 and 1980 Sears Roebuck wanted to recall 60,000 electric fans which could have overheated and burst into flames. But in spite of determined attempts, only 1,300 customers were reached—just 2 per cent.

While all these companies were seriously inconvenienced by their recall experiences, there have been some which have not been so lucky.

The French company Kleber, which refused to recall some suspect tyres, lost approximately $6m in sales when their products were boycotted after a call from a consumers' association—even though the company won a subsequent court case against the association.

The unfavourable publicity which is often associated with a recall makes the whole issue very sensitive to most companies. Some companies prefer to ignore it completely—believing that a recall is unlikely to happen to them.

This is particularly evident in most Western industrialised countries where consumer legislation leaves the decision whether or not to recall a hazardous product in the hands of individual companies. Most governments, however, give themselves special powers to achieve virtually the same ends by other means; for example in the UK the Government can make a prohibition order, which prevents traders from supplying suspect products to the public.

Only in the U.S. and Japan is there any form of mandatory recall for dangerous products.

While recalls are voluntary in the UK, there are two industries which have special relationships with Government on the issue of hazardous products—transportation, particularly the car manufacturers, and pharmaceuticals. Both industries have voluntary codes of practice which are closely monitored by the Departments of Transport and Health respectively. Many Companies in these industries have highly developed recall systems.

Another sector with highly-developed recall systems is the food industry, particularly the supermarket chains, which are often able to implement so-called "silent" recalls. This can occur when products are still in warehouses or just on the shelves, and withdrawal can be achieved without publicity.

Two of the most recent recalls in the UK have concerned the Sinclair Research computer company and the hand tools manufacturer Black and Decker.

In March this year Sinclair recalled 28,000 of its ZX Spectrum computers because of a fault in a power pack. The Black and Decker recall, which happened last year, involved about 100,000 units—almost a year's production run—also because of an electrical fault.

ICL spans the great divide

ONE OF the most entrenched divisions on the British shopfloor is that between mechanical craftsmen such as fitters and machine operators and electrical craftsmen working with wiring and electrical equipment.

Some companies have succeeded in introducing flexibility across some of the trades within each of these two broad categories but few have ever attempted to breach the divide between mechanical and electrical trades.

However, ICL, the UK computer manufacturer, has now done just that at its mainframes systems development division at West Gorton, Manchester.

The breakthrough, after some hard talking with representatives of the Amalgamated Union of Engineering Workers and the Electrical and Plumbing Trades Union, covers only a small unit—26 skilled time-served craftsmen working on prototype computer and computer modifications.

The management decided to go down the road of crossing skills—and the shopfloor agreed to it—partly because of the manpower cutbacks at ICL which have shrunk the West Gorton workshop to a third of its former size. The programme was assisted, too, by the fact that the 26, ranging in age from 23 to 56, were some of the best craftsmen at ICL.

Breakthrough

The exercise has not penetrated the company's manufacturing plants and ICL concedes it would be much more difficult to do that. The division's management sees it, though, as a practical breakthrough on flexibility and job training, the progress of which has been watched closely by ICL's manufacturing arms.

As a result of a 44-week training programme the division now has former wiremen capable of, and actually doing, sheet metal work, spot welding and lathe operating, fitters carrying out wiring work and welders soldering printed circuits. The men have also had training in the different branches within the mechanical or electrical group of trades to which they were formally attached. As a sign of the workshop's new cost and time saving job flexibility one fitter has done the metal fabrication, assembly and complete wiring of a control unit.

The men are now graded as technicians with staff status. This is in line with the aim of David Dace, the division's director, to give everyone at the plant staff status. "The division between hourly paid and staff is bloody ridiculous," he says.

The training has involved one day a week at a local technical college based on training programmes provided by the Engineering Industry Training Board—modified to suit ICL workshop needs—together with in-house training provided partially by the Manpower Services Commission.

The company concedes that it will take some time for men to build up speeds on jobs they are not used to doing and there will still be an obvious preference to place jobs on the basis of "horses for courses."

Stan Kirby, who was the electricians' union convenor during talks on the scheme, says the men were initially worried that the company just wanted more flexibility to allow further manpower reductions, but says the men took to the retraining enthusiastically.

The men have been rewarded by a payment of 6 per cent on their basic rates for acquiring new skills and another 4 per cent will be paid when they complete a much shorter course, just starting, on basic planning and quality control.

John Philbin, the workshop's manager, says the men benefit from staff status, more security and more rewarding work and have made themselves more "saleable" on the labour market. He also points to a competitive spirit bred by the training programme.

That such a change at ICL is uncommon points to the snail-pace at which some productivity advances are taking place in Britain. Trevor Sumner of the EITB says that in his North-West region very few companies have even tackled the division between electrical and mechanical trades and some have abandoned attempts at breaking it. Many companies, he says, are still finding it difficult to introduce flexibility even within the mechanical trades framework.

Nick Garnett

The British Petroleum Company p.l.c.

(Incorporated in England under the Companies (Consolidation) Act 1908 Registered No 102498)

The Application Lists will open at 10 a.m. on Friday 23 September 1983 and will close at any time thereafter on the same date. At any time prior to the announcement of the basis of allocation the Bank of England may agree with the Underwriters that, by reason of a material adverse change in relevant conditions, this Offer should not proceed, in which event no allocations will be made and the underwriting agreement will terminate.

The whole of the issued share capital of The British Petroleum Company p.l.c. ("BP"), including the Ordinary Shares now offered, is listed in London on The Stock Exchange. The information given herein with regard to BP and its subsidiaries ("the BP group" or "the group") has been supplied by its Directors. The Directors have taken all reasonable care to ensure that the facts stated herein relating to the BP group are true and accurate in all material respects and that there are no other material facts the omission of which would make misleading any statement herein, whether of fact or of opinion, relating to the BP group. All the Directors accept responsibility accordingly.

This Offer is made on the basis of English law, by which all contracts resulting from applications hereunder shall be governed. No person receiving in any territory outside the United Kingdom a copy of this Offer and/or an Application Form may treat the same as constituting an invitation to him nor should he in any event use such Application Form unless in the relevant territory such an invitation could lawfully be made to him without compliance with any unfulfilled registration or other legal requirements. It is the responsibility of any person outside the United Kingdom wishing to make an application hereunder to satisfy himself as to full observance of the laws of the relevant territory in connection therewith, including the obtaining of any governmental or other consents which may be required or the compliance with other necessary formalities, and pay any transfer or other taxes requiring to be paid in such territory in respect of Ordinary Shares acquired by him under this Offer.

THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND

on behalf of

THE LORDS COMMISSIONERS OF HER MAJESTY'S TREASURY

Offer for Sale by Tender

130,000,000 Ordinary Shares of 25p each of

The British Petroleum Company p.l.c.

at a minimum tender price of £4.05 per share

(with provision for persons applying for no more than 1,000 Ordinary Shares to apply at the Striking Price)

Payable: On application — £2.00 per share By 3 p.m. on 11 January 1984 — the balance of the purchase price

Directors of BP

*P I WALTERS *Chairman*

*R W ADAM
Deputy Chairman

†SIR LINDSAY ALEXANDER
Chairman, Lloyds Bank International Limited

‡†LORD BARBER TD
Chairman, Standard Chartered Bank PLC

†THE HON. SIR JOHN BARING CVO
Chairman, Baring Brothers & Co., Limited

*R BEXON

*P G CAZALET

SIR CAMPBELL FRASER FRSE
Chairman, Dunlop Holdings plc

*P J GILLAM

THE EARL OF INCHCAPE
President, Inchcape PLC

‡†T JACKSON

*R MALPAS CBE

SIR JAMES MENTER FRS
Principal, Queen Mary College, University of London

†SIR ALASTAIR PILKINGTON FRS
Director, Pilkington Brothers P.L.C.

*M R RENDLE

A W WHITEHOUSE Jr
Chairman of the Board and Chief Executive Officer, The Standard Oil Company (Sohio)

* *Managing Director*

‡ *Appointed by HM Government*

† *Member of Audit Committee*

Secretary and Registered Office
J E WEDGBURY,
Britannic House, Moor Lane,
London EC2Y 9BU

Auditors of BP
ERNST & WHINNEY

Registrar's Office
BP House, Third Avenue,
Harlow, Essex CM19 5AG

Solicitors to BP
LINKLATERS & PAINES

Solicitors to the Offer
FRESHFIELDS

Underwriters

S. G. Warburg & Co. Ltd.
Lazard Brothers & Co., Limited
Robert Fleming & Co. Limited
Morgan Grenfell & Co. Limited
Kleinwort, Benson Limited
J. Henry Schroder Wagg & Co. Limited

Brokers to the Offer

Mullens & Co.
Cazenove & Co.
Scrimgeour, Kemp-Gee & Co.
Rowe & Pitman
Hoare Govett Limited

DETAILS OF THE OFFER FOR SALE

In 1977 and 1979 HM Government reduced its holding in BP by means of public offers for sale and in 1981 sold the rights to which it was entitled under the rights issue made by BP. HM Government now holds 38.85% of the BP Ordinary Share capital (including the Ordinary Shares which it acquired from the Bank of England in 1982). This Offer will result in HM Government's holding being reduced to 31.73%. HM Government has no plans at this stage to sell any more of its present holding in BP and will not do so in the next two years.

The issued Ordinary Shares of BP are fully-paid and identical in all respects. The Ordinary Shares now offered will be sold ex the interim dividend payable on 17 November 1983, on which basis all Ordinary Shares are now quoted. Under the Articles of Association of BP, voting rights are only available to new holders one month after registration unless the Directors determine to reduce this period.

No application will be accepted from any person without a declaration that the application is not with a view to the making, within any part of or to nationals or residents of the United States of America, its territories or possessions, or within Canada, of any distribution within the meaning of relevant Securities laws.

A Registration Statement incorporating a US Prospectus has been filed with the US Securities and Exchange Commission. US nationals and residents are not prohibited from making applications provided that they obtain a copy of the US Prospectus and give the required declaration. In the United States copies of the US Prospectus can be obtained from Morgan Guaranty Trust Company of New York, ADR Department, 30 West Broadway, New York, New York 10015 (telephone (212) 587-6018).

Procedure for Applications

All shares for which applications are wholly or partly accepted will be sold at the same price (the "Striking Price"), which will be not less than the minimum tender price of £4.05. The Striking Price may however be higher than the minimum tender price.

A person applying for not more than 1,000 shares may make either a Tender Application or a Striking Price Application. A Tender Application means an application at the minimum tender price of £4.05 per share or at any higher tender price per share which is a whole multiple of 1p chosen by the applicant. A Striking Price Application means an application under which the applicant does not have to decide at what price he should tender but will be deemed to have tendered at the Striking Price.

A person wishing to make a Striking Price Application should write the words "Striking Price" in the appropriate box on the Application Form.

A person applying for more than 1,000 shares must make a Tender Application.

Applications must be for a minimum of 100 shares and thereafter for multiples of shares as follows:

No. of shares applied for	100 - 500	500 - 2,000	2,000 - 10,000	10,000 - 20,000	20,000 and over
Must be a multiple of	50 shares	100 shares	500 shares	1,000 shares	5,000 shares

A person proposing to apply for shares who is in any doubt as to the course he should take should consult his bank manager, stockbroker, solicitor or other professional adviser.

The purchase price is payable in two instalments. The first instalment of £2.00 per share is payable on application.

A separate cheque or banker's draft for £2.00 per share, drawn in sterling on a bank in and payable in the United Kingdom, the Channel Islands or the Isle of Man, made payable to the Bank of England and crossed "Not Negotiable — BP Shares", must accompany each application.

Applications must be made in accordance with the conditions set out herein and the instructions contained in Application Forms. Tender Applications lodged without a price being stated will be deemed to have been made at the minimum tender price. All cheques are liable to be presented for payment and Letters of Acceptance and surplus application moneys may be retained pending clearance of cheques. The right is reserved to reject, in whole or in part, any application regardless of the price tendered or deemed to be tendered. Furthermore, except as provided below under "Employee Applications", a person may not make:

(i) more than one Striking Price Application; or

(ii) both a Striking Price Application and a Tender Application; or

(iii) more than one Tender Application at the same price.

Accordingly, any multiple applications or suspected multiple applications (other than Tender Applications at different tender prices) are liable to be rejected or aggregated.

Applications, **which will be irrevocable until 4 October 1983**, must be made on the Application Forms provided and should be lodged by post or by hand **so as to be received by 10 a.m. on Friday 23 September 1983** with the appropriate Receiving Banker by reference to the initial letter of the (first-named) applicant's surname (or, in the case of a corporation, to the initial letter of its name) as follows:

A–D Barclays Bank PLC, New Issues Department, PO Box 123, Fleetway House, 25 Farringdon Street, London EC4A 4HD

E–K by post: Lloyds Bank Plc, Registrar's Department, Goring-by-Sea, Worthing, West Sussex BN12 6DA
by hand: Lloyds Bank Plc, Registrar's Department, Issue Section, 111 Old Broad Street, London EC2

L–Q Midland Bank plc, Stock Exchange Services Department, Mariner House, Pepys Street, London EC3N 4DA

R–Z National Westminster Bank PLC, New Issues Department, PO Box 79, Drapers Gardens, 12 Throgmorton Avenue, London EC2P 2BD

Alternatively, applicants for whom it is more convenient to submit applications to a Receiving Banker in Scotland may lodge applications by post or by hand **so as to be received by 10 a.m. on Friday 23 September 1983** with:

The Royal Bank of Scotland plc, New Issues Department, PO Box 86, 34 Fettes Row, Edinburgh EH3 6UU.

Applicants may also lodge their applications by hand in envelopes addressed to the appropriate Receiving Banker and marked "BP Shares" not later than 3.30 p.m. on Thursday 22 September 1983 at any of the following addresses:

ABERDEEN	Bank of Scotland, 53 Castle Street, Aberdeen Clydesdale Bank PLC, 5 Castle Street, Aberdeen The Royal Bank of Scotland plc, 150 Union Street, Aberdeen
BELFAST	Allied Irish Banks Limited, 2 Royal Avenue, Belfast Bank of Ireland, Registration Department, Moyne Buildings, 20 Callender Street, Belfast Northern Bank Limited, Donegall Square West, Belfast Ulster Bank Limited, Investment Section, 82-86 High Street, Belfast
BIRMINGHAM	Bank of England, 55 Temple Row, Birmingham
BRISTOL	Bank of England, Wine Street, Bristol
CARDIFF	Lloyds Bank Plc, 27 High Street, Cardiff
EDINBURGH	Bank of Scotland, The Mound, Edinburgh
GLASGOW	Bank of England, 25 St. Vincent Place, Glasgow Clydesdale Bank PLC, 30 St. Vincent Place, Glasgow
LEEDS	Bank of England, King Street, Leeds
LIVERPOOL	Bank of England, 31 Castle Street, Liverpool
MANCHESTER	Bank of England, Faulkner Street, Manchester
NEWCASTLE	Bank of England, Pilgrim Street, Newcastle upon Tyne
SOUTHAMPTON	Bank of England, 31-33 High Street, Southampton.

Employee Applications

Special Application Forms are being made available to employees of BP and its United Kingdom subsidiaries who may apply on such a Form at the Striking Price for 100, 150, 200 or 250 Ordinary Shares. Such applications should be lodged by post or by hand with the Bank of England, New Issues, Watling Street, London EC4M 9AA **so as to be received by 10 a.m. on Friday 23 September 1983** (or lodged by hand in envelopes addressed to the Bank of England, New Issues and marked "BP Shares", at any of the addresses outside London at which public applications may be lodged by 3.30 p.m. on Thursday 22 September 1983) and will be accepted in full. An employee may also make a Striking Price Application or Tender Applications on public Application Forms.

Striking Price and Basis of Allocation

The Striking Price may be set above the minimum tender price if both:

(i) Tender Applications at or above the Striking Price have been received for at least half the Ordinary Shares now offered for sale; and

(ii) Tender Applications at or above the Striking Price, together with Striking Price Applications, are accepted in respect of all the Ordinary Shares now offered for sale.

In other circumstances the Striking Price will be the minimum tender price.

The Striking Price will not necessarily be the highest tender price at which sufficient Tender Applications, together with Striking Price Applications, are received in respect of all the Ordinary Shares now offered for sale.

Tender Applications at prices above the Striking Price and Striking Price Applications will be eligible for preferential consideration. The right is reserved to apply different bases of allocation to, and at differing levels of, Tender Applications and Striking Price Applications; this may involve no preference of allocation at particular levels.

Tender Applications at a price lower than the Striking Price will be rejected.

Commission

A commission of 0.5p per share will be paid to recognised banks and licensed institutions (within the meaning of the Banking Act 1979), to Trustee Savings Banks, to National Girobank and to members of The Stock Exchange of the United Kingdom and the Republic of Ireland on acceptances in respect of applications (other than special employee applications) bearing their stamp. However, no payment will be made to any person who would receive a total of less than £10.

Acceptances

Letters of Acceptance, including instructions for payment of the final instalment, will be posted to successful applicants at their risk. If an application is not accepted, the amount paid will be returned in full and, if any application is accepted only in part, the surplus application moneys will be returned in full, in each case by cheque through the post at the applicant's risk.

Letters of Acceptance will be renounceable, in accordance with the instructions thereon and subject to due payment of the final instalment, until 3 p.m. on 10 February 1984. Failure to make payment of the final instalment by 3 p.m. on the due date in accordance with the instructions in Letters of Acceptance will render the previous payment liable to forfeiture and the acceptance liable to cancellation. However, late payment of the final instalment may be accepted, in which event interest may be charged on a day-to-day basis on any overdue amount accepted at a rate equal to the London Inter-Bank Offered Rate for seven day deposits in sterling ("LIBOR") plus 1% per annum. Such rate will be determined by the Bank of England by reference to market quotations, on the due date for the relevant payment, for LIBOR obtained from such source or sources as the Bank of England shall consider appropriate.

The Stock Exchange is expected to authorise dealings to commence in partly-paid form shortly after the basis of allocation is announced. Dealings prior to receipt of Letters of Acceptance will be at the applicant's risk. A person so dealing must recognise the risk that an application may not have been accepted to the extent anticipated or at all.

After expiry of the period of renunciation, shares represented by fully-paid Letters of Acceptance will be registered in the names of those entitled thereto and share certificates will become available on 23 March 1984.

HISTORY AND BUSINESS OF BP

BP was incorporated in 1909 and adopted its present name with effect from 4 January 1982. Although HM Government has since 1914 had a substantial shareholding interest, BP has always been managed and operated as a private business enterprise. HM Government has recently reaffirmed its intention to maintain its relationship with BP in a way which does not breach the traditional practice of non-intervention in the administration of BP as a commercial concern.

The BP group is the largest industrial concern in the United Kingdom, the second largest in Europe and the fifth largest in the non-communist world, on the basis of 1982 sales. It is engaged in all phases of the petroleum industry, including exploration, production, transportation, processing and marketing of crude oil, petroleum products and natural gas. The BP group has pioneered the discovery and development of oil in several important oil producing areas, including the North Sea and Alaska, and is currently exploring in 27 countries. It also has substantial investments in minerals and coal and investments in a range of other interests. Its activities are organised into four principal businesses (oil and gas exploration and production; oil supply, refining and marketing; chemicals manufacture and distribution; and minerals exploration and production), five smaller businesses (gas processing and marketing; coal production and marketing; supply of animal feedstuffs and breeding stock; manufacture and marketing of detergents; and computer and communication systems development and operation) and a division engaged in developing existing commercial activities and investigating investment opportunities. Overall control is exercised by a corporate head office. Both head office and the businesses (together with BP's shipping and research functions) are supported by a number of specialist service departments.

The BP group's interests in the United States consist primarily of its 53% interest in The Standard Oil Company, an Ohio corporation ("Sohio"), and its interests in the Trans Alaska Pipeline System. In balance sheet terms approximately 42% of the BP group's fixed assets, excluding the interests of outside shareholders, were located in the United States at 31 December 1982. Sohio is managed separately from the other businesses.

FINANCIAL AND OTHER INFORMATION RELATING TO BP

1. Nature of financial information

The financial information contained herein does not amount to full accounts within the meaning of section 11 of the Companies Act 1981. Full accounts relating to each financial year from which the financial information has been derived have been delivered to the Registrar of Companies. BP's auditors have made a report under section 14 of the Companies Act 1967 in respect of each such set of accounts and each such report was an unqualified report within the meaning of section 43 of the Companies Act 1980. The financial information for the six months ended 30 June 1982 and 1983 is based on BP's published unaudited interim results for January–June 1983.

The abridged financial information given below follows the format prescribed by the Companies Act 1981, as used in BP's 1982 Annual Report and Accounts. Additionally in 1981 the income statement presentation was revised to classify production taxes as an operating expense. The financial information for the earlier years has been restated to take account of the above changes in presentation.

2. Group income statements

The following is a summary of the income statements of the BP group, on the historical cost basis, for the five years ended 31 December 1982 and for the six months ended 30 June 1982 and 1983:

Figures, except where otherwise indicated, in £ million	1978	1979	1980	1981	1982	Six months ended 30 June (unaudited) 1982	1983 (Note (v))
Turnover	14,278	18,243	20,656	25,755	29,336	14,218	15,529
Operating expenses including production taxes	13,167	15,309	17,866	23,456	27,049	13,216	14,378
	1,111	2,934	2,790	2,299	2,287	1,002	1,151
Other income	224	328	503	787	712	362	307
Operating profit	1,335	3,262	3,293	3,086	2,999	1,364	1,458
Interest expense	471	405	432	654	694	357	305
Profit before taxation	864	2,857	2,861	2,432	2,305	1,007	1,153
Taxation	272	760	959	811	1,103	517	627
Profit after taxation	592	2,097	1,902	1,621	1,202	490	526
Minority shareholders' interest	148	476	467	549	486	239	233
Profit before extraordinary items	444	1,621	1,435	1,072	716	251	293
Extraordinary items (Note (i))	—	—	—	54	4		
Profit for the year	444	1,621	1,435	1,018	712		
Distribution to shareholders	97	274	322	363	370		
Retained profit for the year	347	1,347	1,113	655	342		
Earnings per Ordinary Share (Notes (ii) and (iii))	28.1p	102.6p	89.9p	63.9p	39.4p	13.8p	16.1p
Dividends per Ordinary Share (Notes (iii) and (iv))	6.359p	17.500p	20.250p	20.250p	20.250p	6.25p	7.00p

Notes:

(i) Extraordinary items

	1981 £m	1982 £m
Closure and reorganisation costs	54	230
Reclassification of inaccessible oil	—	(226)
	54	4

The credit for the reclassification of inaccessible oil arose from a review of the accessibility of all group oil as a result of which oil, previously capitalised at original cost, was transferred from fixed to current assets at current value.

(ii) The calculation of earnings per Ordinary Share is based on profit before extraordinary items less preference dividends related to the weighted average of Ordinary Shares in issue during the relevant period. The figures for the years 1978 -1980 have been adjusted for the 1981 rights issue.

(iii) Earnings and dividends per Ordinary Share for 1978 have been restated to reflect the conversion and sub-division of each £1 unit of Ordinary Stock into four Ordinary Shares of 25p each in 1979.

(iv) The dividend per Ordinary Share for 1979 excludes a special dividend of 1.917p paid in that year. The dividends shown for the six months ended 30 June 1982 and 1983 are the interim dividends (amounting to £114 million and £128 million) declared on 2 September 1982 and 1 September 1983 respectively.

(v) Due to the uncertainties in computing taxation for a period of less than a year, the amounts shown for taxation for the six months ended 30 June 1982 and 1983 represent the best estimates for those periods.

3. Source and application of funds

The following is a summary of source and application of funds of the BP group, on the historical cost basis, for the five years ended 31 December 1982 and for the six months ended 30 June 1982 and 1983:

Figures in £ million	1978	1979	1980	1981	1982	Six months ended 30 June (unaudited) 1982	1983
Funds generated from operations	1,814	2,342	2,883	2,975	4,075	1,671	2,262
Capital expenditure	972	1,172	1,773	3,079	3,856	1,624	1,631
Acquisitions	109	442	425	1,258	96	—	23
Dividends paid (including minority shareholders)	115	217	356	472	556	340	354
Funds generated or (required)	618	511	329	(1,834)	(433)	(293)	254
Financed by:							
Shares issued	—	—	146	609	—	—	21
Finance debt	(299)	(287)	553	733	(130)	493	(647)
Liquid resources	(319)	(224)	(1,028)	492	563	(200)	372
	(618)	(511)	(329)	1,834	433	293	(254)

4. Group balance sheets

The following are summarised balance sheets of the BP group, on the historical cost basis, at 31 December 1982 and 30 June 1983:

Figures in £ million	31 December 1982	30 June 1983 (unaudited)
Fixed assets		
Intangible assets–exploration expenditure	1,049	1,387
Tangible assets	13,141	13,751
Investments	1,310	1,377
	15,500	16,515
Current assets		
Stocks	4,803	4,001
Debtors	4,381	3,957
Investments	1,198	777
Cash at bank and in hand	382	431
	10,764	9,166
Creditors–amounts falling due within one year		
Finance debt (Note (i))	2,694	1,972
Other creditors	6,080	5,319
Net current assets	1,990	1,875
Total assets less current liabilities	17,490	18,390
Creditors–amounts falling due after one year		
Finance debt (Note (i))	3,842	4,135
Other creditors	1,429	1,451
Provisions for liabilities and charges	613	665
Net assets	11,606	12,139
Minority shareholders' interest	2,960	3,183
BP shareholders' interest	8,646	8,956
Represented by:		
Capital and reserves		
Called up share capital	466	468
Share premium account	887	906
Reserves (Note (ii))	7,293	7,582
	8,646	8,956

Notes:

(i) Finance debt

	31 December 1982 £m
Due within one year	2,694
Due after one year:	
Due within 2 years	285
3 years	284
4 years	441
5 years	266
6 to 10 years	1,306
Due after 10 years	1,260
	3,842
	6,536

Finance debt at 31 December 1982 of £6,536 million includes £2,994 million in respect of Sohio.

(ii) Reserves
Beserves at 30 June 1983 include a credit for exchange adjustments since 31 December 1982 of £124 million and the deduction for the interim dividend of £128 million declared on 1 September 1983.

(iii) Capital commitments
Authorised future capital expenditure by group companies at 31 December 1982 was estimated at £5,800 million including approximately £805 million for which contracts had been placed.

(iv) Contingent liabilities
There were contingent liabilities at 31 December 1982 in respect of guarantees and indemnities entered into as part of, and claims arising from, the ordinary course of the group's business, upon which no material losses were considered to be likely to arise.

A claim for $108 million has been brought by Abu Dhabi Gas Liquefaction Company Limited, a related company, against BP International Limited and others, claiming damages in respect of losses which are alleged to have arisen from the construction of a *liquified natural gas plant on Das Island. The claim is considered by BP to be excessive and the action is being actively defended by* all the defendants. It is not possible at this stage to estimate whether any liability will fall upon BP International or, if so, its extent.

5. Recent developments

(a) Interim results

On 1 September 1983 BP announced its unaudited interim results for the three months and the six months ended 30 June 1983. The *following is extracted from that announcement:*

	April–June 1982 £m	April–June 1983 £m	January–June 1982 £m	January–June 1983 £m
Profit before extraordinary items				
Historical cost basis	160	219	251	293
Replacement cost basis (after adjusting for current cost of sales less minority interests)	149	283	251	484
Current cost basis	55	163	61	193

For the second quarter of 1983 the profit of the group before extraordinary items was £219 *million on the historical cost basis* and £283 million on the replacement cost basis.

The improved results compared with the first quarter arose primarily within oil trading. North Sea production activities together with the group's share of income from Sohio continued to be the major contributors to profits. In Chemicals losses continued at the reduced level seen in the first quarter. Other business results were not significantly changed.

Sohio's contribution to group profit on the historical cost basis was £148 million compared with £113 million in the first quarter. The total of £261 million for the half-year was slightly below the contribution of £275 million in the first half of 1982.

Capital expenditure for the half-year was £1,631 million, similar in total to the corresponding period of 1982. BP Exploration's expenditure on development of production facilities fell following completion of the Magnus platform whereas Sohio's expenditure increased as a result of the acquisition for $364 million of exploration leases in the Gulf of Mexico. Expenditure was funded entirely from group internal resources.

In the first quarter announcement reference was made to extraordinary items for 1983 arising from the disposal of downstream *interests in Canada and the ending of Sohio's abrasives* manufacturing operations. Further extraordinary costs are expected to arise mainly from the rationalisation of the group's remaining interests in Canada. Taken together these items will not result in any material gain or loss for the year.

(b) Magnus field

The Magnus field came on stream on 14 August 1983 and at 13 September 1983 was producing at approximately 73,000 barrels per day. Plateau production of 120,000 barrels per day is expected to be reached at around the end of 1983.

(c) Forties field

On 7 September 1983, BP announced plans to sell working in*terests of up to 12% of the Forties field (representing around* 12.5% of its interest in the field), some 10% by tender in up to 40 units of 0.25% each at a minimum tender price of £5.25 million per unit and the balance by sales, currently under discussion, of just under 1% to each of two companies. No one purchaser would acquire more than 8 units and none of the sales would include interests in the Forties pipeline or associated on-shore facilities. All the sales would be subject to the prior consents and approvals of the Secretary of State for Energy to the necessary assignments of licence interests. It is intended to complete the tender sales early in 1984. Since the value of the units will vary from company to company depending on its particular circumstances, the minimum tender price should not be taken as an indication of the value to BP of its interests in the field. The Chancellor of the Exchequer announced on 13 September 1983 that legislation would be introduced in the 1984 Finance Bill with effect from the date of the announcement denying relief against petroleum revenue tax attributable to an interest purchased in a mature field such as Forties for any expenditure incurred outside the field prior to the date upon which the claimant or an associated company became a participator in the field. BP stated on 13 September 1983 that whilst it was still considering the details of the announcement, it believed that the proposed sales would still be attractive *to many companies, particularly those currently* exploring and appraising in the North Sea or intending to do so.

6. Factors affecting the group

The operations of the group, like those of all major international oil companies, are affected by political events and local laws and regulations as well as by unexpected commercial and other developments. Similar considerations apply to sectors of the minerals industry. The oil industry is highly competitive, both within the industry and with other industries supplying energy and fuel. Exchange rate changes affect the group (crude oil is usually purchased and sold by the group in US dollars but product trade is in a multiplicity of currencies) but afford no more currency risk to the group than in the case of multinational companies in general. The timing, implications and overall effect of all such events upon the group and its profitability are uncertain and vary from country to country and from time to time.

GENERAL INFORMATION

1. Ownership of BP

The share capital of BP at 31 August 1983 was as follows:

Authorised £		Allotted £
7,250,000	in 8% (now 5.6% plus tax credit) Cumulative First *Preference Shares of £1 each*	7,232,838
5,500,000	in 9% (now 6.3% plus tax credit) Cumulative Second Preference Shares of £1 each	5,473,414
587,250,000	in Ordinary Shares of 25p each	(i) 455,865,208

(i) Includes 5,629,883 Ordinary Shares allotted in connection with BP's acquisition of NANTA S.A. and 1,176,154 Ordinary Shares allotted under the BP Group Share Schemes, all since 1 January 1983.

On a poll members are entitled to two votes for every £5 in *nominal amount of the Preference Shares and* to one vote for every 25p in nominal amount of the Ordinary Shares held by them respectively.

Under BP's Articles of Association, HM Government has the power to appoint two directors, either of whom may veto any resolution of the Board or a Committee thereof. The Government has never since such right was conferred intervened in the administration of the Company as a commercial concern and the right to veto a resolution has never been used.

HM Government holds 708,496,892 Ordinary Shares (38.85%) and 1,000 First Preference Shares. Following this Offer, HM Government's holding of Ordinary Shares will be reduced to 578,496,892 Shares (31.73%).

At 31 August 1983 approximately 20.5 million Ordinary Shares were represented by American Depositary Shares which are listed on the New York Stock Exchange.

2. Market quotations

The following table shows the highest and lowest middle-market quotations *(in pence) for the periods specified,* based on the Daily Official List published by The Stock Exchange:

1982	Highest	Lowest	1983	Highest	Lowest
Jan/March	306	272	Jan/March	338	292
April/June	324	280	April/June	442	340
July/Sept	312	258	July/Aug	452	392
Oct/Dec	340	274	1–14 Sept	440	426

3. Miscellaneous

(a) An agreement dated 16 September 1983 between HM Treasury, the Bank of England, BP and its Directors and others contains provisions to facilitate this Offer and includes indemnities to BP and its Directors and others. An agreement of the same date provides for the underwriting and sub-underwriting of the Offer in consideration of commissions aggregating 1¾% of the minimum tender price plus VAT, out of which the Underwriters will pay a sub-underwriting commission of 1¼% and fees to the Brokers to the Offer. The Underwriters and Brokers will bear their own expenses, other than legal expenses. Subject as aforesaid, the expenses of the Offer, including UK stamp duty, will be paid by HM Treasury.

(b) Interests of the Directors as recorded in the Register maintained pursuant to the Companies Act 1967 do not, in the aggregate, exceed 100,000 Ordinary Shares of BP. No Director is materially interested in any contract which is significant in relation to the group's business. The Hon. Sir John Baring and Sir Alastair Pilkington are Directors of the Bank of England.

(c) Save as disclosed herein, BP has not between 31 December 1982 and the date of this document made any material issue of share or loan capital and no material commissions, discounts, brokerages or other special terms have been granted by BP in connection with the issue or sale of any share or loan capital. Save for options made available by BP under its Savings-Related *Share Option Schemes no share or loan capital of BP is under* option or agreed conditionally or unconditionally to be put under option.

4. Documents available for inspection

Copies of (a) the Memorandum and Articles of Association of BP; (b) the Annual Report and Accounts of BP for each of the two financial years ended 31 December 1981 and 1982; (c) BP's Group Income Statements for the periods January–March and January–June 1983; (d) the agreements referred to in paragraph 3(a) above; (e) the announcement by BP relating to Forties field made on 7 September 1983; and (f) the US Registration Statement, as from time to time amended, and the documents incorporated by reference therein, may be inspected at the offices of Linklaters & Paines, Barrington House, 59–67 Gresham Street, London EC2V 7JA during usual business hours on weekdays, Saturdays excepted, up to and including 23 September 1983.

DATED 16 September 1983

Copies of the 1982 Annual Report and Accounts of BP and of the US Prospectus are obtainable (within the limit of available supplies) from the Secretary, The British Petroleum Company p.l.c., Britannic House, Moor Lane, London EC2Y 9BU.

Copies of this Offer for Sale and Application Forms may be obtained from:

Bank of England, New Issues, Watling Street, London EC4M 9AA, the branches and the Glasgow Agency of the Bank of England.

The head offices and main branches of:

Bank of Scotland, Barclays Bank PLC, Clydesdale Bank PLC, Co-operative Bank p.l.c., Coutts & Co., Lloyds Bank Plc, Midland Bank plc, National Westminster Bank PLC, The Royal Bank of Scotland plc, Williams & Glyn's Bank plc, Yorkshire Bank PLC.

The main UK branches of Allied Irish Banks Limited, Bank of Ireland, Northern Bank Limited and Ulster Bank Limited.

The main branches of Trustee Savings Banks.

Main Post Offices.

THE UNDERWRITERS:

S. G. Warburg & Co. Ltd., 30 Gresham Street, London EC2P 2EB

Robert Fleming & Co. Limited, 8 Crosby Square, London EC3A 6AN

Kleinwort, Benson Limited, 20 Fenchurch Street, London EC3P 3DB

Lazard Brothers & Co., Limited, 21 Moorfields, London EC2P 2HT

Morgan Grenfell & Co. Limited, 23 Great Winchester Street, London EC2P 2AX

J. Henry Schroder Wagg & Co. Limited, 120 Cheapside, London EC2V 6DS

THE BROKERS TO THE OFFER:

Mullens & Co., 15 Moorgate, London EC2R 6AN

Scrimgeour, Kemp-Gee & Co., 20 Copthall Avenue, London EC2R 7JS

Hoare Govett Limited, Heron House, 319/325 High Holborn, London WC1V 7PB

Cazenove & Co., 12 Tokenhouse Yard, London EC2R 7AN

Rowe & Pitman, City Gate House, 39-45 Finsbury Square, London EC2A 1SA

Examples of Amounts Payable on Application

No. of shares	Amount £	No. of shares	Amount £
100	200	600	1,200
150	300	700	1,400
200	400	800	1,600
250	500	900	1,800
300	600	1,000	2,000
350	700	2,500	5,000
400	800	5,000	10,000
450	900	10,000	20,000
500	1,000	and so on in the appropriate multiples	

TECHNOLOGY

EDITED BY ALAN CANE

ENERGY CONSERVATION

Computer program to save home heat

BY MIRA BAR-HILLEL

THE FIRST demonstration in the UK of a computer program designed to help householders identify the most cost-effective ways of improving the energy consumption of their homes took place in London last week.

The program was demonstrated by Jean-Yves Garnier, a member of the team which developed the software at the University of California at Berkeley.

The programme, which took an international team of experts over two years to develop, is "user friendly"—questions and answers are in plain English. It does, however, have three "levels"—long, for beginners, short, for those with more experience, cutting out some of the steps, and a level for the expert, who can just feed in the information and obtain results without any 'conversation' at all.

The accuracy of the program has been measured against the U.S. Department of without any "conversation" at Energy's major energy usage program, an extremely complicated and detailed effort requiring roomfuls of hardware, and also against the U.S. Army's energy program BLAST. It came out of both with flying colours.

Named *CIRA* (for Computerised Instrumented Residential Audit) it can be run on any microcomputer of the Z80, 8080 or 8085 family with a CP/M operating system (version 2.0 or greater), 64k of random access memory, two 8 inch single density disk drives or equivalent, 80 column video terminal (cursor addressing is necessary and a 132 column printer. The entire package is well within the reach of just about every firm of architects or building surveyors—indeed, many already have it.

CIRA does all the work itself by asking all the questions: wall areas and types, heating system, passive solar features, fuel prices. The user simply answers. If at any point he cannot understand the question, a single keystroke will bring "help"—the computer will respond with an explanation together with examples if possible. If the user understands the question but does not remember the possible answers, another keystroke will display a list of options, multiple-choice style. In fact, if more than two wrong answers are given to any question, this list will appear automatically.

Some questions are beyond the knowledge of the ordinary householder, like those requesting the thermal values of walls of certain types or the solar-gain factors of windows. This can save even professional energy assessors a great deal of time in leafing through voluminous handbooks.

The actual calculations of energy consumption are based on heating and cooling algorithms developed at Lawrence Berkeley and other laboratories. In the USA, over 100 variations have been programmed relating to location and climate.

FINLAND BOASTS MOST AUTOMATED BANKING SYSTEM IN EUROPE

Listen to the talking bank

BY ELAINE WILLIAMS

"WELCOME to the home banking service. *Please give your customer number.*" So says the Union Bank of Finland's main computer every time someone rings its new banking service.

This Finnish bank is one of the first in Europe to introduce an electronic banking service for use in the home, particularly one which can talk to its customers with a human voice.

The service is also unusual in that it does not require the customer to use anything more *sophisticated than a touch* tone telephone such as those increasingly found in the UK.

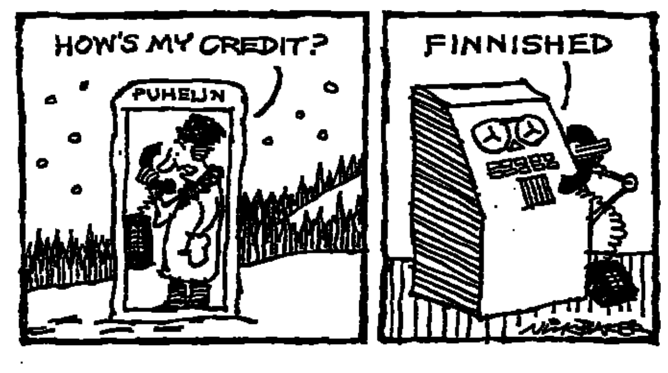
The user, after dialling the appropriate telephone number, is linked directly to the bank's computer centre. The computer has a voice synthesis system and speaks either Finnish or Swedish to customers. The computer can tell which language each particular account holder speaks by the personal identification, or PIN, number.

Users are asked to tap in the PIN number on the telephone dial followed by a four-digit security code which changes every time the service is used. A list of 50 code numbers are provided at a time.

The banking service allows customers to find out the state of their bank accounts, transfer money and pay bills. The service can be accessed in any country which has touch tone telephones. During the past year the service has been run on an experimental basis at six towns in Finland and involving 2,000 customers. Now the Union Bank will begin to actively market the service. Fuji Bank in Japan recently introduced a similar service.

Surprisingly, for a country of only 5m inhabitants, Finland is among the most advanced in the use of automated banking systems. Mr Eero Kostano, a director of the Finnish Bankers' Association based in Helsinki, admitted however, "We were not originally among the pioneers in banking technology but now we are very advanced in terms of the range of services we offer."

Mr Kostano explained that in the early 1970s Finnish banks studied the possibility of introducing an on-line interbank payment system. By the end of that decade it was operational and the banks began to look for other ways of co-operating. This led to the three major commercial banks in the country pooling their network of automated teller machines.



Now more than 2,300 ATMS are connected into the network and the savings and co-operative banks are planning to join the ATM network later this year.

Why have the Finnish banks been so successful in 17 per cent of the bank's total administrative costs. This bank which has 52 per cent of the private customer account market in the country was the first to introduce ATMs in 1978.

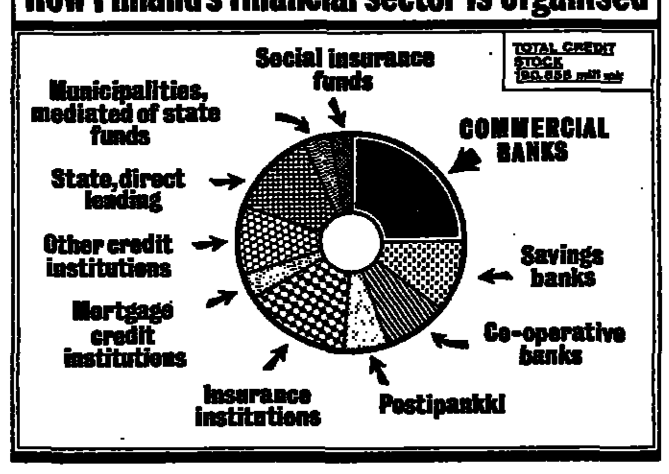
The next area where banks

The computer has a voice synthesis system and speaks either Finnish or Swedish to customers. It can tell which language a customer speaks by the personal identification (or PIN) number.

automating nearly all aspects of their business when other, larger countries have failed to do so? "The answer," says Mr Risto Wartiovaara, a director of the Union Bank, "is the relative simplicity of the Finnish banking system. It is far easier to get everyone to agree on common standards."

The Union Bank alone spends FM 170m a year on operating and improving its computing services. This represents about hope to co-operate is in the introduction of point of sale terminals systems which will allow electronic banking in shops. Mr Kostano said that the banks had decided not to opt for an expensive centralised system but a service which would allow shops to connect directly into each bank's computer network to take advantage of the present network without massive investment in sophisticated telecommunications.

How Finland's financial sector is organised



One area, however, where the banks tend not to work together is in the provision of services to corporate customers. The Union Bank has realised the importance of providing sophisticated services to its larger commercial customers and offers electronic banking for its 100 larger company customers.

Mr Wartiovaara said that the idea for corporate banking system started with an analysis of paper flow between the bank and its corporate users. "It became *clear that unless something* was done to remedy the situation we would, in the area of corporate banking, be faced with a considerable volume of manual processing."

This, combined with competitive pressure within and outside the country, prompted the Union Bank to "replace manual transactions by electronic ones and, at the same time, provide new features in corporate services' closely related cash *management.*"

After a year of experiments, the Telesyp system, as it is called, became operational. Now customers are joining the service at a rate of between two and three a month. Customers can use a variety of terminals to link into the service. These include the IBM 3270, Ericsson Alfaskop and Nokia terminal which is made locally. Telesyp runs on an IBM 3032 mainframe computer which also connects to the bank's Tandem computers which operate the ATM network.

Wherever possible the Finnish banks have tried to use home grown technology within their banking service. Many of the terminals are manufactured by the electronics arm of the Nokia group, which is one of the largest forestry groups in the country. Nokia produces terminals, telecommunications equipment and personal computers.

The voice synthesis system was developed by a small company called Euroka. This company would like to sell the system overseas and work with other companies to develop other languages.

Mr Markku Pyysing at Euroka said that Finnish was one of the easiest languages to synthesise because it is phoentic and there is no ambiguity in speech and spelling as there is in English, for example. This means that the computer can be asily programmed to speak simply by typing in whole words.

Research

HP looks for UK co-operation

THERE ARE signs that the Hewlett Packard corporate management is taking an increasing interest in the UK from the R and D point of view, particularly since this country is now HP's biggest outlet for products outside the U.S., having recently overtaken Germany.

Although no decisions have yet been made in Palo Alto, David Baldwin, who manages Hewlett Packard (UK) at Pinewood near Wokingham, takes the view that if a major lab is placed in Europe it will probably be in the UK and probably at the Pinewood site.

In any event, John Doyle, who is vice-president responsible for research and development in the U.S., has recently been in the UK talking to both academic and government officials. One of the things he looks forward to in the UK is greater co-operation between industry and the universities / polytechnics, although HP already has links with Cambridge, Loughborough, Edinburgh and Bristol.

Help is, however, more easily given to colleges in the U.S. where HP has provided some $30m of equipment at little or no cost to itself due to U.S. taxation laws.

OEM

FTS makes export push

FUTURE Technology Systems, FTS, has decided to strengthen its push in to the European original equipment manufacturing marketplace with its new generation of 16 bit machines. Based on the powerful Intel 8086, the FTS computer uses Concurrent CP/M-86 operating system for multi-tasking applications. More details on 05055 3637.

Printer

Plotting out smoothly

A RESOLUTION of 400 dots *to the inch has been achieved* in a new electrostatic printer/plotter from Benson Electronics of Bristol (0454 617777).

The print head used on this 36 inch wide plotter is a further development of the company's Quadrascan technique which, by using four offset rows of writing stylii produces smooth overlap of adjacent dots to give clean outlines and uniform blackness of solid areas.

The machine, called Suprascan 9636, has a dynamic toning and drying system that optimises the use of consumables, ensures good contrast and provides dry, non-smearing results.

Apart from its use as a printer (a standard *Gothic* fount ASCII character set is used), the machine can also produce hard copy from Tektronix and many other video screens.

Cables

Splicing fibres

STC HAS been licenced by British Telecom to produce a fusing splicing device for optical fibre cables. Designed for single mode fibres, it can operate from batteries or the mains. It boasts automatic single-mode-fibre final alignment; microprocessor controlled pre-fusion and fusion and, is easy to use. More information on 0279 26811.

هكذا من الأصل

THE ARTS

Architecture/Colin Amery

All a matter of taste

It was Dr Johnson who thought that taste was to do with the "new blown bubbles of the day." He would certainly feel that about the provocative exhibition that has just opened at the Boilerhouse in the Victoria and Albert Museum. (*Taste—an exhibition about values in design*, at the V and A until November 24.)

Stephen Bailey has decided that taste is now the vogue subject, despite the fact that it is impossible to define, organise or present as an exhibition. He takes the subject head on as far as it relates to the selection of the objects that make up our immediate environment. Perhaps wisely for an exhibition centre devoted to materialism and its artefacts—indeed even to the idea of consumerism—he has decided to ignore literature, the cinema, art, the theatre as serious influences and concentrate on THE OBJECT.

Treating objects as icons the exhibition is arranged to show—by a subtle device of putting the "good taste" objects on plinths and the "bad taste" objects on top of dustbins — that some things are better designed than others. The exhibition does not show or even try to show *why* this is the case. We know that taste is choice and one would certainly be exercising taste if one liked all the badly designed objects in the show.

The grand tour is seen as an early exercise in the acquisition of informed taste but the compilers of the exhibition seem to sneer at the production of plaster copies of the antique because this meant the "mass production of taste."

The 19th century brings mass production with a vengeance and with it a spreading of vulgarity—exemplified by a pair of earings made from the stuffed heads of two humming birds. An elaborate American sofa of the 1860's is shown as a terrible warning — you begin to sense what is coming . . . Here it is, a quotation from Le Corbusier is written on the wall.

"Modern design is intelligence made visible." Well, that is a highly debateable proposition but you sense in this exhibition that it is seen as the underlying truth. Bric à brac of all kinds smacks of excess and jokiness, but a simple oil can or safety razor is good because it relates closely to its function. Stephen Bailey is a wonderfully old-fashioned character, convinced that the application of economy and serviceability will produce designs for objects that will then become examples of "good taste."

There is one area in this show which has been treated with quite unpardonable contempt—and that is architecture. The model for part of the TV-am building by Terry Farrell and the design for the Portland office building by leading American architect Michael Graves are both included in the section marked Kitsch. This shows how far Bailey is from beginning to understand the new climate of Post-Modernism.

What a curious and peculiar show this is: very much to be seen as an undergraduate joke—playing with ideas and with the public in a manner that leaves one feeling very dubious about the standards of taste and scholarship now prevailing at the Boilerhouse.

*

Taste of a different kind is much to the fore in an exhibition organised by the British Architectural Library at the Heinz Gallery, 21, Portman Square, London W1 (open Mon to Fri 11.00 am to 5.00 pm, Saturday mornings 10.00 am to 1.00 pm until October 29).

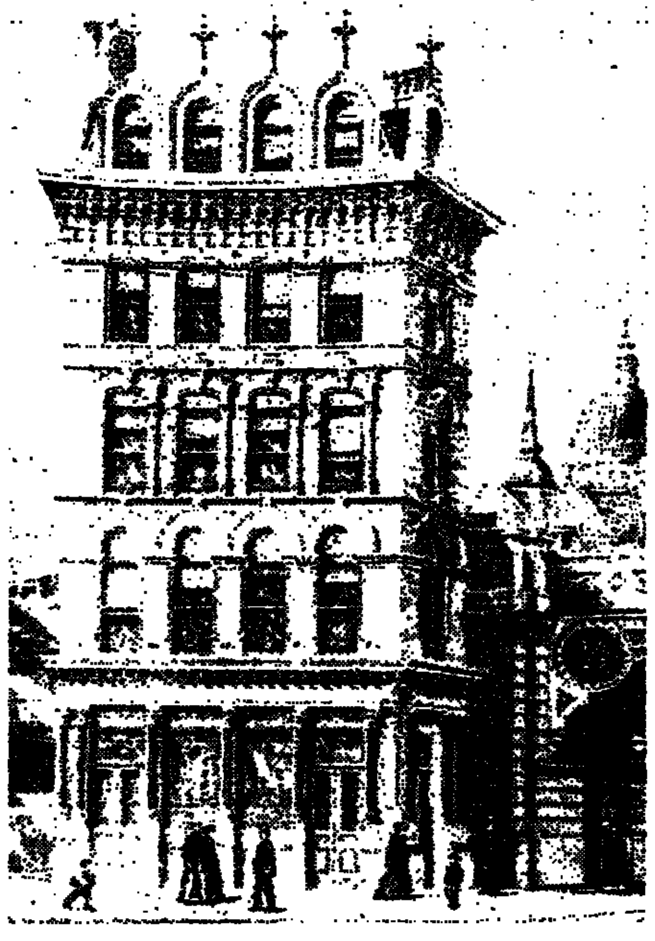
Bricks and Beer looks at the design of the English pub from 1830 to 1939. It is a good survey, much enlivened by the fruity examples of pub glass, tiles, terra-cotta and even china beer pulls. Decoration was all and the organisers are right to point out that the late Victorian pub was a refuge from the drab nature of every day life.

Surely that is still true today. It is a jovial show dealing carefully with the kind of architectural fantasy world that only happens in England. Aesthetic judgment has to be suspended —the only sadness is the poverty of the later designs and the real lack of vigour in our modern pubs.

*

Until October 1, there is an opportunity to see one of the largest exhibitions of modern British architecture ever assembled in the capital. Called *New Developments in Historic Towns*, it is at new galleries in 1, Hobhouse Court, Suffolk Street, London SW1 and is a sponsored show put on by The British Property Federation. It contains a range of recent town developments in model form and plans and perspectives and is deeply informative about the level of British commercial architectural design.

That level is low. These schemes are, with few exceptions, insensitive to the cities in which they stand, unsubtle and inelegant. Every single person involved in property development in this country should see this exhibition. It displays clearly and without fear the mean average standards



King Lud, Ludgate Circus, by Lewis Isaacs, c. 1870.

Cyrano de Bergerac/Barbican

Michael Coveney

Leading actors work much harder at the Royal Shakespeare Company than they do at the National. In the Pit, Antony Sher is giving his joyously daemonic double act of Bulghakov's Molière and Molière's Tartuffe, while the main house company is brilliantly led by Derek Jacobi as Benedick, Prospero and Cyrano.

I doubt if Jacobi's heroic deeds have been matched in London since the great periods of the Old Vic, just after the War and in the mid-1960s. On Saturday night, at the 17th performance of *Cyrano (the Amadeus of 1897)* since it opened in late July, the audience, myself included, rose to its feet in a spontaneous ovation for a performance of glorious romantic flourish tempered in steel. The great thing about this Cyrano, apart from the nose which happily endows the star with a strikingly Gielgudian profile, is its self-knowledge.

This quality is mainly revealed in the wit and brio of Anthony Burgess's translation which invests Rostand's war horse with an unaccustomed lightness and intelligence. It zips along from the opening scene where Cyrano splendidly demolishes a ridiculous actor. Cyrano is a man of many parts: poet, soldier and loyal friend. But he is also a fine dramatic criticis and even the inventor of science fiction. While the young Christian is wedded offstage to Roxane, he diverts the interfering spoilsport Comte de Guiche (a glittering, authoritative performance by John Carlisle) with an extraordinary cabaret of an Irish spaceman.

Christian, in Burgess's phrase, is "a nonentity cursed with a pretty face" and despite suffering his doltish insults, Cyrano puts his poetic gifts at the youth's disposal in order to win Roxane for him. In Terry Hand's magnificent production, the comic prompting in the balcony scene gives way to Cyrano's lyrical surrogate wooing. Alice Krige, in her best performance since joining the company, stands aloft shrouded in a foliaged canopy as Cyrano's romantic poison works its spell.

The staging throughout is conceived in broad, lush strokes of ensemble composition and operatic splendour. The opening backstage bustle is a riot of black and silver, flecked with the red roses of the flower girl and the complementary crimson splash of the cardinal's robes. The siege of Arras is a smoky tableau of exhausted soldiers animated by the arrival behind the lines of Roxane in her food-laden coach. Pelted with Cyrano's letters, she is unable to stay away, and the truth of her lover's identity is about to burst when Christian is carried in fatally wounded. Jacobi bites the bullet and allows Roxane the dignity of her illusions, Christian the distributed satisfaction of his secret.

Ralph Koltai's design is richly emblematic, the verdant bough of the balcony scene replaced in the last act in the convent (where Cyrano is still paying Roxane a weekly visit after 15 years) with the autumnal golden glow of a knotted sinking sun flower. The busyness of the theatre scene is later followed with the more organised confusion of Ragueneau's pastry shop where the patron—another notably fine and very amsuing performance by Pete Postlethwaite—delivers some inspired Burgess doggerel as the almond tarts are prepared in the kitchen.

Postlethwaite is the reverse side of the poetic coin, like Cyrano a compulsive wordsmith but with nothing to celebrate except dough. This gives him both comic robustness and good reason to be devotedly interested in Cyrano's exploits.

Cyrano's final flourish of his white plume of celibacy ("There's a kind of panache in virgin vows") is rendered with heart-stopping conviction. There is, after all, very little that is more poignant in human existence than the cruel penalties extorted by society from our inability to match private instincts to public expression. The tragedy of unfulfilled longing is one shared by Christian, Roxane and the Count, as well as by its chief embodiment, Jacobi's unforgettable Cyrano.

Birds of Passage/Hampstead

Martin Hoyle

In a sub-Mike Leigh suburban living-room Chekhovian longings work themselves out to a descant of domestic comedy à la *George and Mildred* with a dash of *New Society* and a touch of Orton's (and before him Coward's) reliance on proper names to provoke laughter. ("If you want to know what England's really like come out to Chislehurst"). If "spot the influence" seems an unfair game to play with a young author, Hanif Kureishi has enough to say to deserve a voice of his own.

He prompts literary allusions. David, the head of the household, is an old-style humanist-socialist who gave his school-leaver daughter the works of William Morris, and nicknames the affluent Pakistani lodger Oblomov. His the responsibility, presumably, for the now adult daughter to observe with the earthy immediacy of her profession that prostitution "bought her time and intensity of experience." When Mr Kureishi remembers hes a good writer he trips into portentousness, as in the exit line, the solemnly meaningless "some things have more value than other things."

Redundant, David sells his home to the lodger. A smooth operator from a privileged background, Asif has a fling with David's sister-in-law, the archetypal *nouvelle riche*, and eventually employs her husband, a businessman facing ruin. The play ends with the house stripped for conversion into flats, Asif having eight Indians lined up as unwitting victims of impending local race violence. The family disperses ineffectually, one to America. The slamming door has a symbolic ring.

Much of this is funny. One forgives a creaky opening where for our benefit, two characters tell each other what they already know. A hymn to the virtues and faults of English suburbia is affectionately unironic, as spoken by Joe Melia.

Mr Kureishi's touch is perfunctory when touching dutifully on serious issues like the mutual contempt between races. As yet he cannot combine depiction of character with comment on it: too often someone leaps into unlikely articulateness to illustrate a point. Rowena Cooper's rich bitch, tense with frustration, is of a different class and generation from her alleged sister. However, she, like Belinda Sinclair's ruefully vinegary daughter who knew what she wanted and had the disappointment of getting it, fits well into this intelligent, uneven (the second half runs out of impetus) work of promise that provides tantalising allusions on many levels.

Last Night of the Proms/Albert Hall

Andrew Clements

A Prom season of unexpected high quality and interest ended on Friday and Saturday in the usual, predictable way without much distinction. Beethoven's ninth symphony is an immovable piece on the penultimate night; this time it was entrusted to the London Symphony Orchestra and Chorus, conducted by Ferdinand Leitner.

Leitner had brought Haydn's B flat symphony No 98 as an opener: an inauspicious beginning, heavy footed, with muddy articulation. The orchestral sound was thick and lifeless: woodwind solos lacked grace and wit and energy was sorely lacking in the outer movements. When the Beethoven began it similarly showed little sign of inner life. The first movement bore almost no weight or intensity; the scherzo was strangely unathletic. Matters only began to improve in the Adagio, an account of unexpected lightness and wispy lyricism, and here too the LSO wind at last began to find some positive character of its own.

More reliance than usual was thus laid on the finale to generate drama and excitement and that, given the circumstances, it naturally did. The LSO chorus sang enthusiastically and the quartet of soloists —Linda Esther Gray, Cynthia Buchan, Graham Clark and Gwynne Howell—provided some of the incisiveness absent elsewhere. It was a performance that succeeded almost in spite of itself—no doubt the audience went home suitably stirred if not entirely satisfied.

One surprise at least was reserved for Saturday's Last Night. Before the traditional tub-thumping got under way, Norman Del Mar and the BBC Symphony Orchestra performed, of all things, the third symphony of Szymanowski, the *Song of the Night*. Following Bax and Elgar it seemed the most unlikely choice for the most self-consciously British of all musical events. But the gesture towards the Polish theme that has run through the entire season was nicely made, and the cool, transparent textures and Persian poetry it sets were an effective antidote to the over-heated atmosphere of the rest. Philip Langridge was the tenor soloist with the BBC Singers and Symphony Chorus; fresh toned and confident all of them, though perhaps some of the textural niceties were overlooked.

Sadler's Wells Ballet

Clement Crisp

The two young dancers leading the performance of *La Fille mal gardée* at the Wells on Saturday afternoon were as sunnily in command of their roles as even the most matinée-resistant heart could wish.

Lunchtime torpor was dissipated by the sight of Sandra Madgwick and Michael O'Hare—alert, gifted—stepping out in this masterpiece, looking effortlessly right as the pastoral lovers and dancing with a freshness that kept the choreography ever ebullient. The darting, buoyant Miss Madgwick, with her prettily rounded arms and her soaring jump, plays Lise in engaging style, character and dance unclouded, and if at a few moments she is not meticulous in giving a step the clarity and polish with which Nadia Nerina first endowed it, the role yet lives and touches our hearts, Nerina-fashion.

Mr O'Hare, making his London début as Colas, is precision itself when dealing with the dance, and he has superabundant charm for the character. I liked very much the brightness with which he cut the steps in the first ribbon-dance, bringing a speed and brilliancy few other interpreters have shown there. Throughout the action his natural, eager playing confirms him as a dance-actor of unaffected gaiety and easy grace; there is a quickness and a generosity of feeling in his interpretation of demi-caractère heroes — Colas, Frantz, the Young Painter in *Two Pigeons* — that wins all his audience's sympathy.

Also notable at this performance was David Bintley's Alain. I suppose there must be a role which Mr Bintley will not enhance, to which he will not bring some entirely apt realisation of its eccentric or dramatic possibilities, but I have yet to see it. His Alain on this occasion had a nervous energy that did not seem at odds with the poor simpleton's sideways-on approach to life and love. The solo in the first scene had more physical vivacity than I have seen with any other interpreter, and—here Bintley the choreographer showed his mettle—the least implication in the steps was joyously revealed. (I detected, though it may be a tiny embellishment by Mr Bintley, a fleeting reference to Wilson, Keppel and Betty's "Egyptian" manner, and a minuscule cygnet step.) Manic enthusiasm coloured the reading, and some pathos. The character was never submerged in jokes, and this Alain's exit from the farmhouse in the third scene, pulled along by his father, had a brief and splendid moment when Mr Bintley suddenly escaped and returned to make a last offer of the engagement ring before being finally whisked away. It was funny, touching, true; and it is why Mr Bintley is a character-artist of rarest distinction.

The Sadler's Wells dancers were at their best in this work, the sense of happy ensemble playing, so central to the company's identity, clear to see and to enjoy.

Arts news in brief

The Arts Council has approved 27 jazz bursaries of between £240 and £1,250. These were selected from a total of 93 applications.

This year's winners include Chris Bisco who is going to explore "multi-phonic" techniques for the saxophone, Will Evans for the development of a percussion mobile and Pete King, the saxophonist, to enable him to complete arrangements and original compositions for his quintet and quartet.

*

The British Library has granted a licence to Chadwyck-Healey, the microform specialists, to publish the first index to provide a listing in one alphabetical sequence of the holdings of the Department of *Manuscripts* which has the greatest collection of Western manuscripts in the world.

To ensure a comprehensive search of the collection over 30 catalogues and indexes have to be consulted, and the need for one comprehensive index has long been recognised.

The new reference tool will save time and enable scholars to search more effectively.

*

Sixteen of Britain's leading jazz musicians will take part in a concert on Friday, September 23, at the Elizabeth Hall in London to celebrate the 40th anniversary of the professional debut of pianist Stan Tracey.

The musicians will be featured in five of the musical ensembles Tracey has performed, broadcast and recorded with during the past 10 years. These will be the big band, an octet, sextet and quartet and the duo of Tracey with reedman Tony Coe.

Welding together the elements of the evening will be Ronnie Scott who, as well as acting as compere, is likely to play in the big band.

To coincide with the concert, which starts at 7.45 pm, Steam Records is releasing its 10th album, called *Stan Tracey Now*.

*

The 1983 Cheltenham Festival of Literature will run from Sunday October 9 until Saturday October 15. The bill includes A. J. P. Taylor on *History as Literature* and Malcolm Bradbury on the *Modern American Novel*.

The Sotheby Lecture will be given by Raymond Williams, on *Writing in the Late Twentieth Century*; and the Shakespeare Lecture by Kenneth Muir, on *The Betrayal of Shakespeare.*

*

Following the success of its sponsorship last year Mitsubishi Electric (UK) who market TV, audio and video equipment in this country, is again sponsoring the English String Orchestra for a major British tour.

The orchestra, which changed its name from the Vivaldi Chamber Ensemble this year, will be performing a series of concerts in 11 towns throughout England and Wales during October and November.

The tour starts at the Guildhall, Cambridge on October 4, and subsequently visits Christchurch, Bath, Farnham, Wigmore Hall (London), Buxton, Norwich, Cheltenham, Chichester, Swansea, and Mold.

Pasquier Trio & Collard/Wigmore Hall

David Murray

With Jean-Philippe Collard to assist them in Fauré's two piano quartets, the formidable Pasquier Trio delivered their all-French programme on Saturday with stern panache. Their address is less a matter of persuasive seduction than of frontal attack—power, confident sweep, tough-minded style. I flinched a little at the beginning of each quartet as the unison strings tore into the big tune over Collard's hard-driving piano, but it was exciting; and the broad proportions of both works were sharp and justly carved.

Collard's piano-detail was scrupulous, though his treatment of the winsome tune in the earlier scherzo was curiously bitty. In fact they played the First Quartet last—presumably because of its franker charms, but surely a mistake: we should have found our feet more easily with the more oblique Second had it followed, for it takes its starting-point from Fauré's earlier essay. At least the Second gave ample opportunity to admire the cool expressive poise of Bruno Pasquier's viola, before he and Collard relinquished the platform to Régis Pasquier and Roland Pidoux for Ravel's astringently refined Sonata for Violin and Cello. That got a strong performance, not very expansive but studded with hard insights.

Both in the Sonata and after the interval in Roussel's string Trio, his last completed work, there were passing suspicions of false pitch. They hardly smudged the crisp Sonata, but the Trio is full of Rousel's most rarefied late harmonies, and the doubtful tuning sometimes made them opaque. The cool, athletic Pasquier style suited the piece very well, however, and it was good to hear this neglected music. In general the Pasquier Trio boasts that lucky combination of marked individual personalities with single-minded ensemble that marks the best chamber teams.

Horovitz benefit reading

The Poetry Society has *organised a benefit reading for* Frances Horovitz on September 20 at 7.30 from which all proceeds will go to the benefit fund established by Gillian Clarke for Frances. The poet's career as a broadcaster and reader has been seriously curtailed by a cancer operation.

Snow Light, Water Light by Frances Horovitz with drawings *by Paul Stangroom will be pub*lished by Bloodaxe Books in time for the reading, profits on sales of the book will be given to the fund.

Among poets donating their services are Fleur Adcock, Alan Brownjohn, Gavin Ewart, Roger McGough, Adrian Mitchell, Alan Sillitoe and Ken Smith.

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Music

September 16-22

LONDON

Carlo Maria Giulini returns to London this week to conduct the Philharmonia Orchestra in Bruckner's 8th Symphony (Sun, Wed). Royal Festival Hall (928 3641).

Jorge Bolet: Brahms, Rachmaninov, Liszt. Elizabeth Hall, Sunday. (928 3641).

London Philharmonic Orchestra, conductor Klaus Tennstedt: Linda Esther Graw, Anne Sofie von Otter, Eberhard Buchner and Robert Lloyd in two performances of Beethoven Symphonies Nos 8 and 9 (Mon, Tues). Royal Festival Hall (928 3641).

London Symphony Orchestra, conductor Richard Hickox: Brahms, Vaughan Williams, and soloist Michael Roll playing Grieg's Piano Concerto (Tue). Barbican Hall (638 8891).

The Fires of London, conductor Nicholas Cleobury: Maxwell Davies, and a first performance of Robert Kyr's "Maelstrom". Elizabeth Hall (Wed) (928 3641).

Michael Ponti, piano: Schumann, Rachmaninov, Chopin and Liszt. Elizabeth Hall (Thur) (928 3641).

PARIS

Paul Küntz Choir and Orchestra with Monique Frasca-Colombier, Violin, Sophie Küntz, Violin, Michel Giboureau, oboe: Bach's Violin Concertos (Tue 9pm) Saint-Severin Church (5637480).

Chicago Symphony on tour

Chicago Symphony's tradition of beginning the season by performing round Illinois is being extended this year to cover Texas as well as its home territory. Under the direction of guest conductor Garcia Navarro, the orchestra will perform works by Dvorak, Ravel, Strauss, Tchaikovsky and Roy Harris in venues ranging from Decatur (Monday) to College Station, Texas (Thur). Also in the tour will be Austin (Wednesday) and a final weekend (Sept 23 and 24) in Lubbock and San Antonio. The Spanish-born maestro has conducted with the Chicago Symphony since 1980, having been music director of the Valencia Symphony and the San Carlos Opera, with the Salzburg Festival included in his busy itinerary at the end of this season.

Israeli Philharmonic Orchestra conducted by Zubin Mehta with Schlom Mintz, violin, in a gala concert in profit of cancer research; Beethoven: Overture No 3 "Leonora", Violin Concerto, Symphony No 7 (Tue 8.30pm) Théâtre des Champs Elysées (723 4777).

Israeli Philharmonic Orchestra conducted by Zubin Mehta: Mozart, Berg, Brahms (Wed 8.30pm) TMP-Châtelet (261 1983).

Orchestre de l'Ile de France conducted by Alexandre Myrat in the finals of the Composers Competition (Tue) Espace Cardin, Ave Marigny (Festival Estival) (271 5700).

Danish Radio's Symphony Orchestra and Choir conducted by Michel Corboz: Mendelssohn's "Elias" (Tue) St Germain-des-Prés church (Festival Estival) (271 5700).

Paul Kuntz Choir and Orchestra: Vivaldi Concertos for rare instruments (Tue) St.-Severin church (563 7480).

Paris Chamber Music Festival: J.S. Bach; 4 sonatas for violin and harpsichord, (Mon) Musée Carnavalet, 23 rue Sevigne.

Franz Liszt: Pascal Le Corra, piano (Tue) Musée Carnavalet. Vivaldi: Ensemble des Archets Baroques de Paris and flutes (Wed). Billettes church, 24 rue des Archives.

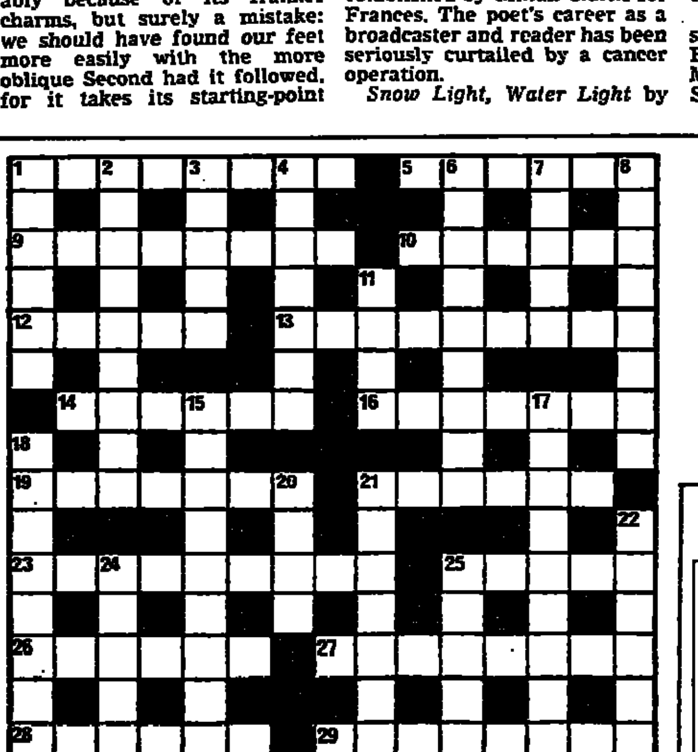
NEW YORK

New York Philharmonic (Avery Fisher Hall): Rafael Kubelik conducting, Schumann, Beethoven (Tue); Kubelik conducting, Andre Watts piano: All-Beethoven programme (Thur). Lincoln Center (874 2424).

WASHINGTON

National Symphony (Concert Hall): Mstislav Rostropovich conducting, Eugene Istomin piano. Rachmaninoff, Shostakovich (Tue, Wed, Thur). Kennedy Center (254 3776).

F.T. CROSSWORD PUZZLE No. 5,220



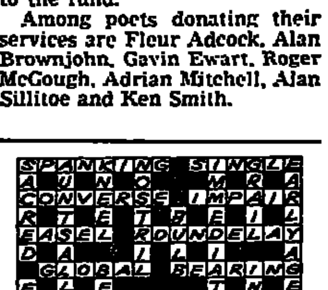
ACROSS

1 Hub-hub (4-4)
5 Olympic event—record set by America (6)
9 A marked man, perhaps (8)
10 Spares may be few and far between (6)
12 Silas shows fibre when in trouble (5)
13 Two men of a bygone era (9)
14 Horrified at being cut by jagged gash (6)
16 Such a measure might be death to our railways (7)
19 They may well ruin a sea-trip (7)
21 Think in depth (6)
23 Get blooming old (3, 2, 4)
25 Cut with a pointed whip (5)
26 Cheap newspaper has a stock phrase for the riff-raff (6)
27 It pushes up water rates in a reorganisation (8)
28 He profits even when told to sell at a loss (6)
29 Get a role as someone's double (5, 3)

DOWN

1 Disinclined to serve a stew (6)
2 But it's not sweetbread (4, 5)
3 Yet such a marriage won't end in the divorce court (5)
4 Not a compound heater (7)
6 Tense, as all human beings are (9)
7 Barker put in business rig-out (5)
8 Arm on the leg (5-3)
11 Clean the decks for surgical inspection, perhaps (4)
15 Bolts are a requirement for an old navigational aid (9)
17 Go fishing, but keep in touch (4, 1, 4)
18 Joint description of Eve's origin (5, 3)
20 Reader's plea for original expression (4)
21 Fear led to a new form of government (7)
22 Not his sort of cult (6)
24 He was employed in sugar-cane growing (5)
25 City investment? (5)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.



Solution to Puzzle No. 5,218

FINANCIAL TIMES
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Monday September 19 1983

A threat to multinationals

IF UNITARY taxation, now spreading through individual states of the U.S., takes hold in the rest of the world, it will pose a real threat to the continued operations of multinational companies.

Under the system of unitary tax, a host country or state does not tax the earnings of a subsidiary company based within its borders. It instead claims a share of the parent company's global profits. It derives this share from some calculation of the proportion of the multinational's total business that is transacted locally.

The idea has some superficial appeal. It is clear that multinational companies try to minimise their aggregate tax bills. The use of tax havens as collecting points for revenue is a common multinational practice. The manipulation of prices at which goods and services are transferred between subsidiaries offers another means whereby group profits can be steered towards low tax areas. It is extremely difficult to police transfer prices—this, indeed, is one reason why the unitary tax system has found favour as a means of assessing state taxes within the U.S.

Maximum tax

But the main reason is not the pursuit by states of "fair" tax but of maximum tax. As a result of the tax revolts of the late 1970s, and the economic slowdown, states have had their revenues squeezed in the last few years. The pressure on them has been excacerbated by the legal requirement to run balanced budgets. Mr Reagan's initiative on "New Federalism," which imposed new financial obligations on states, has further increased their appetite for funds. The growth of unitary taxation is primarily a means to increase taxation on a corporate sector which has no vote—except, in the long-term, with its feet.

The quest for maximum tax means that unitary tax is applied both intermittently and arbitrarily. Each state is free to choose a formula that is biased in its own favour and invariably does so. California, for instance, with high labour costs and property values, derives its share of profits through a formula based upon property, payroll and sales. A developing country, in contrast, would tend to focus upon its share of a group's employees. If unitary taxation became widespread the cumulative result could be a prohibitively high tax charge on a multinational company's global earnings.

Case against

This case against unitary tax does not imply that states or countries should be condemned to be exploited by multinational managements in the interest of some greater good. Host countries still have plenty of scope to apply direct taxes on the payrolls, investments and turnovers of local subsidiaries. Tax on profits generally constitutes only a small part of the fiscal benefit of a company to its host country. The rapid growth of investment incentives and subsidies designed to attract industrial investment to regions of the developed world testifies to this.

On balance the ineradicable element of tax avoidance by multinationals is probably an acceptable price to pay for the continued operation of such companies in a world that has yet to develop a global tax authority. Such companies undoubtedly help in sustaining free trade. They promote an efficient international division of labour, and allocate investment resources appropriately, and with appropriate expertise.

This is the justification for the pressure now being exerted on the U.S. Administration by Britain and other western countries to support U.S. legislation that would stop the trend in the U.S. towards international unitary taxation. The legislation would not prevent unitary tax from being practised within the U.S., but would prevent it from being levied on profits outside the country. If international unitary taxation is allowed to become an established practice it could pose yet another obstacle to resumed growth in the world economy.

Comparability creeps back

"PAY IS a matter for the market place and social needs are the province of the social security system." The assertion comes not from Dr David Owen, leader of the Social Democratic Party at last week's SDP annual assembly at Salford, but from a senior Treasury official rejecting Civil Service union pleas for the low-paid last year.

The outcome of that pay round was, of course, that the higher-paid came out best; the market place had little to do with it. This time the broad target limit has been pared to 3 per cent—officially described as an aggregate provision to cover increases resulting from future pay settlements in case anyone should mistake it for a pay norm—and the Civil Service unions will continue to press the cause of the lower-paid. Are we any nearer to reconciling sensitivity to the market and an explicit target of this kind?

The trouble with targets is that they tend to set a floor to the pay round, notwithstanding the obfuscating language about provisions and aggregates. It follows that there is bound to be some drift; the 3 per cent figure is probably compatible with a 4-5 per cent outcome and will still provide protection for real incomes if the widespread expectation that overall numbers will be reduced further than the Government's present target proves correct.

CBI enthusiasm

On the positive side, upward pressure on wage rates is likely to be particularly strong at this stage of the recovery in the private sector, so the Government's target can exercise some restraining influence on private-sector settlements. No doubt that helps explain the enthusiasm of the Confederation of British Industry for the latest figure. And for any Chancellor content to settle for a public-sector outcome at the bottom end of the private-sector range, there is a temptation to extol the virtues of the market place while putting off the onset of the virtuous day.

Everyone knows that this cannot go on for ever. And after successive years in which civil servants have lagged behind the private sector and suffered a heavy loss of morale, comparability is beginning to creep back into the picture. While the process of negotiating over the Megaw Committee's proposals for a more market-related system is in its early stages, the Treasury is discussing a deal with the unions whereby the Office of Manpower Economics would be asked to collect data on pay movements outside the Civil Service for the 1984 negotiations. Information about recruitment and staff retention would also feature.

Whether this will amount to much in practice remains to be seen since the pay data would apparently be aimed at "informing rather than constraining" negotiations. But it could provide a modest dry run for the pay information board proposed by the Megaw Committee, which is now the subject of longer-term negotiations between the Treasury and the Civil Service unions.

Hurdles

After initial concern in the Cabinet that giving responsibility for pay comparisons to such a board could ultimately lead to a loss of control over pay rates, the Treasury appears not be averse to the idea. The obvious game plan for the Government is to aim for an improved Megaw-style comparability system, but one which starts from a lower base so that the likelihood of a clash with cash limits is reduced. Factors like pension contributions and productivity would no doubt provide the Treasury with some flexibility in negotiation.

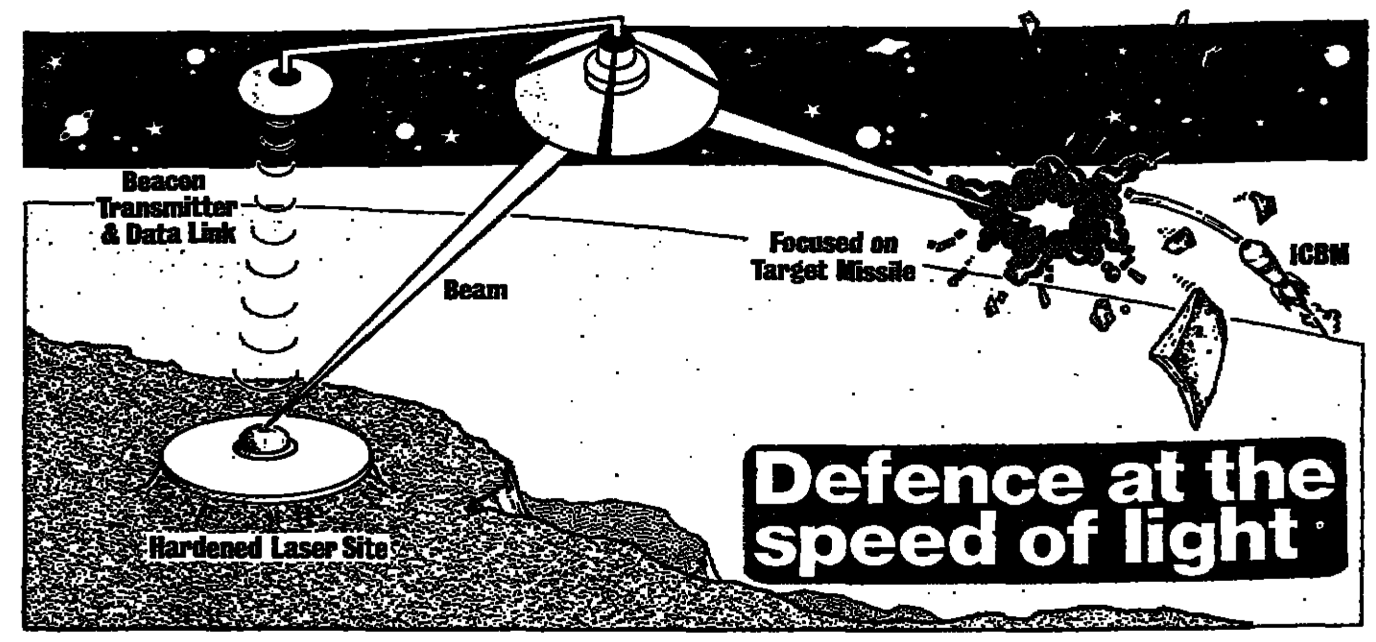
The unions are not uniformly antipathetic to the market-related principles advanced in the Megaw report. Indeed, the Institute of Professional Civil Servants is keen to see them implemented. But a number of hurdles stand in the way of wider agreement, including union demands for a unilateral right to arbitration, access to the pay information board's data and numerous other things. These will take time to sort out.

In the meantime, it is important that those elements of the Megaw report that seek to relate pay to performance and to reflect experience of recruitment and staff retention should not be diluted—though clearly recruitment data needs to be treated with care when the Civil Service is sharply reducing numbers. It ought to be possible to achieve a comparability system which does make adequate allowance for efficiency—and which the Government does not feel obliged constantly to over-ride.

REAGAN'S 'STAR WARS' MISSION

Thunderbolts of the future

By David Fishlock, Science Editor



FOR the past three months about 40 of America's top defence scientists have been meeting secretly in Washington, trying to hatch a considered response to what is popularly known as President Reagan's "Star Wars" speech last March.

Their task is to show whether, and if so how, a vast panoply of research projects on which the Pentagon estimates it has already spent \$1bn (and the civil research sector far more) can be woven into a new national defence programme.

President Reagan called upon American scientists to "turn their great talents to the cause of mankind and world peace; to give us the means of rendering nuclear weapons impotent and obsolete." Could the U.S. create a leak-proof umbrella through which few, and preferably, no Russian nuclear warheads could pass? He did not specify how: whether such an umbrella might be based on earth, on the ocean, or out in space, as most commentators seem to have assumed.

To come up with some answers the Pentagon picked people from its own laboratories and from those of the Department of Energy, which designs its nuclear weapons, and from the research-based defence companies. Academics are conspicuously absent from the study.

The Defence Technology Interdiction Committee, more generally known as the Fletcher Commission after its chairman Mr James Fletcher, former administrator of the National Aeronautics and Space Administration, is due to report to the President in October. It includes such scientists as Dr Harold Agnew, once director of Los Alamos where the first nuclear weapons were designed, but now president of GA Technologies, a nuclear research company; Dr Gerold Yonas, director of pulsed power programmes at Sandia National Laboratory which assembles nuclear weapons and Colonel Wallace Henderson, a former U.S. Air Force nuclear scientist now vice-president for system integration with the BDM Corporation.

The central question before them is whether a national programme to build a new defence umbrella makes sense technically at this time. President Reagan himself acknowledged that it was "a formidable technical task, one that may not be accomplished before the end of this century." Unquestionably it is one that will make the \$24bn Apollo moon-landing programme of the 1960s seem modest.

At the core of the Fletcher Commission's discussions are speed-of-light weapons which hurl, instead of solid ordnance, thunderbolts of radiation at the target. Death rays of this kind have been the dream of inventors ever since war moved into the skies. The U.S. Government has been researching beam weapons — microwave, light (laser), electron and other particle beams, and most recently X-rays — since the 1940s.

Concentrating enough energy into such a beam and focusing it on to a distant target proved to be a formidable problem, even after the invention of the maser and laser as powerful beam amplifiers. In 1963 the late Professor Hans Thirring, the great Austraian physicist—one of the first to predict the H-bomb—calculated that laser anti-ballistic missile (ABM) weapons were "impossible." Even early attempts by the U.S. Army to make a laser rifle were derided as making more sense if the weapon were used as a club.

Twenty years on the picture looks very different. The U.S. nuclear weapon laboratories have invested an immense effort in the technology of beams. One reason was that they needed new techniques to explore, in the laboratory, the extremely complex physics of nuclear explosions, and the effects of radiation from a nuclear explosion upon their own weapons.

Another reason was that these scientists saw that whereas nuclear weapon efficiencies where improving in steps of only a few per cent, beam technology was advancing in big bounds.

Added to all this was news from the frontiers of physics; from the centres specialising in atom-smashing in efforts to explain the fundamental structure of matter. A clear objective of experimental physicists with no thought to weapons has long been how powerful a beam could they make. Curious effects have been observed in experiments with some of these gargantuan accelerators. For example, the beam of Stanford University's two-mile long electron accelerator when "accidentally misdirected" has caused metal structures to explode violently. Normally the scientist avoid problems by using a handy hill to soak up the beam's energy. But it has been calculated that an electron beam with bolt energy only three times as great as Stanford's would cause explosions equal to 1 lb of high explosive. Such an explosion for an ICBM during the launch phase would ensure that its warheads were never launched.

The latest demonstration of the potential of beam weapons came in news released late in July from the U.S. Air Force. Its Airborne Laser Laboratory—a big Boeing aircraft equipped with a very powerful infra red laser—has shot down five Sidewinder air-to-air missiles. The Sidewinder travels at 2,000 knots. Scientists at the Air Force Weapons Laboratory in New Mexico, close by the Sandia and Los Alamos nuclear weapon laboratories, have found a way not only of building a giant laser pumped by the blast of a jet engine, and getting it airborne, but of holding the laser beam steady on a distant and fast-moving target until enough damage was done.

Dr Robert Cooper, director of the Defense Advanced Research Projects Agency (DARPA), the Pentagon's own R and D arm, has been involved with beam weapons since the 1960s.

Locked in a file in his Arlington office is a copy of a report written in 1959 on ABM defence which, he says, outlines the problem they still face today. In a nutshell, this is how to destroy with a high degree of certainty droves of intercontinental ballistic missiles (ICBM) that need a scant 1,800 seconds to reach their target.

Ideally, Dr Cooper says, you want to kill them during the "boost phase," before they have released their warheads to multiply your problems by another big factor, and certainly before they get over your own territory. The boost phase lasts only about 450 seconds.

What has changed in the past quarter-century is the power of beams. The laser had not even been invented in 1959. Bolts of directed energy from beam amplifiers such as lasers and electron accelerators can travel at up to 100,000 times the speed of an ICBM.

Four technologies must be integrated into a weapon system in order to create an ABM defence, the umbrella President Reagan believes the U.S. might be able to base on beam weapons. They are (1) detection, surveillance and tracking of the enemy ICBMs; (2) the beam weapon itself (or "kill mechanism"); (3) communications; and (4) battle management.

All four technologies have made huge strides in 25 years, Dr Cooper says. Radars are 10 to 100 times as powerful, and have been supplemented by optical surveillance systems that did not exist in 1959. The power of the biggest computers, needed for battle management, has tripled every three years since 1959.

Of the four technologies, the one he feels most confident today of developing into a credible ABM sub-system is the beam weapon. The toughest problem, as he sees it, is battle management, for the system must operate at speeds which preclude human intervention. A capability in artificial intelligence which goes far beyond anything Britain's Alvey Committee on super-computers has in mind today will be needed to wage war with speed-of-light weapons.

Could sheer weight of numbers still swamp such a system? Nuclear weapons are a remarkable cost-effective kind of weapon. A warhead costing about \$1m can do damage costing \$1bn. No other weapon in history has been able to match this economy.

Armed with slower weapons, any ABM system is easily swamped simply by launching more nuclear warheads. As Dr Donald Kerr, director of the Los Alamos laboratory, points out, the President was asking whether a system based on beam weapons was within sight which might let the West move away from stockpiling more nuclear weapons. "At what point would an increment of defence be more favourable than another increment of offence?" No such defence system exists at present. "This is the first time for many years that a U.S. President has challenged the scientific community to think about a very difficult problem," Dr Kerr says.

He and many colleagues in the defence science community say they have been disappointed by the response of scientists generally.

Exasperated enthusiasts for beam weapons even accuse their critics of coining the "Star Wars" label deliberately to discredit the whole idea. Certainly the White House would like to be rid of the label.

"What disturbs me about the scientific community's response is the number of people who have postulated what they thought the President said, and then proceeded to demolish it," Dr Kerr says.

At Sandia National Laboratory, managed by Bell Laboratories for the U.S. Government, they are probably as knowledgeable as any centre in the world of the damage beams can do. Dr Al Narath, executive vice-president, says: "I learned a long time ago that it's a fundamental mistake for any technical person to say 'it's not possible' unless it violates fundamental principles — which is not true here."

Nevertheless, Dr Narath acknowledges that the Fletcher Commission faces a very difficult task. Both Apollo and the Manhattan Project, cited as examples of highly successful efforts to harness U.S. scientists to major national goals, had clearly defined objectives, respectively to land man on the moon and to make a nuclear weapon. Both were basically engineering exercises.

It is very difficult to state the goal of the kind of national effort President Reagan is suggesting. He said he wants to "embark on a programme to counter the awesome missile threat with measures that are defensive." But translate that aim into the goal of leak-proof umbrella and the numbers become impossible, Dr Narath says. He believes that the best the Fletcher Commission can do is to pinpoint the numerous technologies that now need support if the technology of beams is ever to come together into a realistic weapon system.

Mr Donald Hodel, who, as Secretary for Energy, has Cabinet responsibility for nuclear weapon laboratories has few doubts that a concerted U.S. effort on beam weapons would bring the Russians to the disarmament talks in a much more co-operative spirit about limits on weapon stockpiles.

But another important pressure for a major national research and development programme comes from a widespread belief that it will help re-establish a technological leadership the U.S. is thought to have lost to Japan and Europe, even to the USSR in some areas such as the space station.

A top-level study of U.S. national laboratories has strongly urged that the three nuclear weapon laboratories, diverted into alternative energies during the 1970s, should refocus on their primary task.

Increasingly, that task may emerge as the "defensive nuclear weapon." This is a phrase just gaining currency in the nuclear weapons community. It relates to a programme called Excalibur managed by the Lawrence Livermore National Laboratory in California. Excalibur harnesses the energy of small nuclear weapons to pump a laser and generate a beam of X-rays, of shorter wavelength and therefore more deadly than other death rays. The idea is that in the brief interval before the entire laser evaporates, the beam might be directed in turn at a host of distant targets, with devastating effect.

Dr Edward Teller, who although retired is the guiding hand for Excalibur, admits he was slow to recognise the potential of lasers as a weapon. Los Alamos focused far more strongly on lasers than Lawrence Livermore, the laboratory he persuaded the U.S. Government to create in competition.

Today, for the first time, all three nuclear weapon laboratories are collaborating on the defensive nuclear weapon, Dr Teller says. Previously, the tradition had been for a new idea from one of the design centres to drive the other in the opposite direction.

But Dr Teller believes that all the talk of Star Wars is designed to discredit beam ABM weapons. "Space is a nonsense." The President himself made no reference to space, he points out. Dr Teller believes that the complex technology of beam ABM weapons with its panoply of associated technologies will have to be installed on the earth's surface, not on space platforms, leaving only the mirrors needed to stear the beams to their targets out in space.

Dr Teller also believes firmly that the U.S. should not try to do it alone, and so isolate itself from its allies behind a beam umbrella. It should be a Nato project. For such a technologically demanding venture "we are limited more by excellent manpower—by ideas—than we are limited by anything else."

Men & Matters

Cheats at work

Gerard Mars, the anthropologist who claims to have been the first to uncover publically the "black economy," this morning takes his investigations a disturbing stage further.

Disturbing, that is, if you happen to be one of the 90 per cent of the work force who Mars estimates are regularly fiddling their employers—by means ranging from using the office phone for personal calls to organised theft of raw materials.

"Most of these 'criminals' do not regard what they are doing as remotely blameworthy," he points out in his new book "Cheats at Work," (Unwin paperbacks), published this morning.

I can report, however, as in common crime, there are various gradations of fiddlers. Mars isolates four distinct types.

Hawks: Like their feathered counterparts, these are individualists who bend the rules in organisations to suit themselves. These are the entrepreneurs, the innovative professionals, and the small businessmen.

Donkeys: These are the loners of the swindling business. Such people are supermarket cashiers, machine minders or bus conductors who get their own back for their isolation from society by penalising it financially.

Wolves: This group, in contrast to the donkeys, work—and steal—in packs. Teams of dock workers, for example, are wolves since they have a hierarchy, order and internal controls. Like real-life wolves they know who their leader is and punish their own deviants.

Vultures: These need group support but also act on their own. Travelling salesmen are vultures as are waiters. But the classic examples of vultures are delivery drivers, linked by a common employer, workbase and task, but also with considerable freedom and discretion during their working day.

As for journalists, one would think that they clearly came into the vulture category. Not so, says Mars, your average journalist is clearly a hawk. Well, hawk, vulture, same sort of thing.

Zero rating

In Norway it increasingly seems the case that the more you are worth the less tax you are likely to pay.

Injustices in the Norwegian system are splotlighted this time each year when local tax officers publish lists of assets and incomes declared, and taxes paid. Uusually every list contains some so-called "zero payers."

A cursory glance at the latest returns suggests that the more prosperous the district the more zero payers are to be found.

Willy Ovesen, chief inspector of taxes, has warned that if matters continue in this direction the day will come when the tax net will catch only salaried employees.

A zero taxpayer, a survey reveals, is more likely to drive a BMW or a Mercedes than a Ford. He may also own a cabin cruiser and a holiday cottage as well as a large detached house in an exclusive district.

On trick, it seems, is to finance these goodies by borrowing. All the interest paid on the loans can then be deducted from taxable income.

Video welcome

When some 400 of the world's top industrial film makers, and the companies that support them, meet in London this week they will find that the Confederation of British Industry has arranged for a welcome easing of the traditionally strict rules under which prizewinning industrial films are judged.

"—and that is one of the few loopholes the Chancellor has left open for the present Duke"

This year it is the CBI's turn to play host to the International Industrial Film and Video Congress. The Barbican Centre cinemas in the City have been booked for the showings.

Following CBI pressure video is being allowed to compete on equal terms with film for the first time. "Such is the technical advance of video that we persuaded our opposite numbers in Europe to make the change," says the CBI.

Another first at this year's congress will be a new prize awarded by the European employers' body, UNICE, for the film or video which best promotes the European idea through industrial co-operation, achievement in research and production, training schemes, or informing the public.

A further change in the judging rules that will please advertising men is that sales and marketing films will be allowed to compete in all the award categories.

Taped exports

On the subject of videos, anyone who has taken a taxi ride through central Lagos recently can testify to the booming market in Nigeria.

Dozens of pirated video tapes are thrust through the car windows by over-eager hawkers, covering the entire cultural spectrum from the Royal Wedding to Emanuelle.

At the official end of the business, though, the going has been getting tougher, with drastic import restrictions, increased customs duties, and a whole range of economic austerity measures pushing up prices.

So Kaye Abraham, a major Nigerian importer of electronic goods (not to mention a sideline in helicopters) decided to expand in another direction, by setting up a video business in Britain.

"The UK is about the best spot to start a video business now," he said at the opening of a new shop in London's Edgeware Road at the weekend. "Nowhere in the western world do you have such a phenomenal growth of turnover."

Truth to tell, it is not the British who are buying video tapes at £40 to £60 a time. About 80 per cent of the business is for export, to Africa and the Middle East.

Long pull

A reader in Baghdad tells me that when she went to an Arab dentist to have a tooth out he told her that it would cost the equivalent of £30.

She said: "But that's ridiculous! My husband has to work two hours for that."

"Missis," the dentist replied, "if you like it, I will take two hours."

Observer

FROM SCOTLAND TO FLORIDA

Rodime runs to stay ahead

By Guy de Jonquieres

THIS IS a success story of a kind which seems to happen every other week in California's Silicon Valley. A small group of managers breaks away from a large electronics manufacturer to pursue a new product idea. With venture capital backing they set up in business. In less than three years, they establish themselves among the leaders in a growing world market, take their company public and get rich.

The difference is that in this case all the people involved are British, except for one expatriate American hooked on the British way of life; and the launching pad for their enterprise was not Northern California but central Fife in Scotland.

Their company, Rodime, is heading for sales of £20m in the year to September 30. More than half its turnover comes from the U.S., where it has already won a solid reputation in the computer industry. It is also something of a hot property among American investors. It has raised about \$27m in two equity issues on the U.S. Over-the-Counter (OTC) exchange and is currently valued at almost \$150m.

Today, Rodime is poised to make a further thrust which, if it succeeds, should assure its place in the big league. It has seized a vital six-month lead over its competitors in developing a second-generation product which seems set for the same sort of explosive sales growth enjoyed by the personal computer industry.

Rodime designs and makes rotating disc memories (whence it takes its name). The devices store large amounts of data which can be fed into, and retrieved from, computers in a fraction of a second.

The idea for the company was first mooted in 1979 by four senior employees at the peripherals plant of Burroughs, the U.S. computer manufacturer, in Glenrothes, Fife. The men, three Scots and plant manager Dr Leonard Brownlow, an American, decided to go it alone partly because they felt that Burroughs was not moving as fast as it could to exploit opportunities in the market for smaller computers. (Burroughs has since closed its plant, which is a few hundred yards away from Rodime's headquarters.)

The scale of their project required financing well beyond their own resources. But finding sympathetic investors to put in seed money proved a struggle at first.

Mr Mervyn Brown, finance director, says today that many prospective backers then lacked the technical skills to appraise what was, after all, a high-risk venture. "There's no real precedent for this kind of thing in Britain," he says. "So investors were not prepared to believe it could happen."

The breakthrough came at a meeting with Mr Geoff Taylor, head of TDC Developments, then part of the Finance for Industry group and since renamed Investors in Industry, owned by the Bank of England and major British clearing banks.

He agreed to put up about £850,000—the largest unsecured investment TDC had ever made. But first, he persuaded the four founders to rewrite their business plan, which had originally been to make more conventional "floppy" disc drives. Instead, they decided to attack the then embryonic market for small, rigid disc drives offering much higher performance.

The team included two Ph.Ds in physics and two qualified accountants with a well balanced mix of experience in the design, development, engineering and production of computer memories. But they lacked a marketing man. At Mr Taylor's suggestion, they recruited Mr Malcolm Dudson, previously marketing director of Data Recording Instruments, a National Enterprise Board subsidiary.

Two weeks after the TDC deal was signed in October 1980, Mr Dudson was on the road, selling a product which did not yet exist. His first stop was California, where he set up shop in a friend's kitchen. "In those days I was the galactic salesman. I even thought of having it printed on my business card," he recalls.

The founders were convinced that to be competitive, they must aim from the start to sell worldwide. That meant securing a foothold early on in the American market, which is generally considered to be six months to a year ahead of Western Europe. "Our marketing philosophy was that we'd take coals to Newcastle and sell in the U.S.," Mr Dudson says. "There was room for a competent team to start up if they moved fast enough."

Rodime saw its chance in a new type of 5¼-inch diameter rigid disc, which would meet demand for extra storage capacity from the rapidly-growing numbers of small computer users. Until then, rigid discs existed only in sizes of 8 inches and above and were used mainly in larger computer installations.

Hugh Routledge

Dr Norman White, Director of Engineering, and Mr Malcolm Dudson, Director of Marketing, at their Scottish launching pad in Fife

Seagate, a recent U.S. start-up company, had just started to pioneer the market. Rodime judged that it had to have a product of its own on display in the early summer of 1981 at the National Computer Conference, the U.S. industry's bi-annual shop window.

EUROPE'S NEW ENTREPRENEURS

Back home in Scotland, the development team threw themselves into a frenzy of activity to meet the deadline. In less than six months, they came up with a product which was technically a match for what the competition had to offer.

By using four discs instead of two and applying advanced micrelectronic circuitry, they achieved four times more data storage than Seagate's first model and faster operating speeds. Much effort went into minimising the number of components, to increase reliability and simplify assembly. That also helped to cut manufacturing costs, a key consideration in exporting to the U.S., which imposes a 6 per cent tariff on imported computer peripherals.

Soon afterwards, the company launched a second range of 5¼-inch units, offering still higher performance. Mr James Porter, who publishes an annual survey of the disc market in the U.S., estimates that Rodime will ship about 10 per cent of the 1m 5¼-inch drives to be sold worldwide this year at an average price of about \$500 each. That would put it in fourth place after Seagate, Tandon and Miniscribe, all U.S. companies.

Rodime is keen today to emphasise that it is past the start-up stage and is actively planning for the long term. It is building a 60,000 sq ft plant in Florida, due to open early next year, and provides benefits for its 320-odd Scottish staff which many bigger companies might envy. All its employees (none of whom belongs to a union) get life insurance, private health insurance, paid holidays and pension entitlements. Moreover, their pay is indexed to inflation, with merit increases on top.

But the intense effort of the critical early days has left its mark. Long, tense, hours spent together at close quarters seem to have exhausted any desire among the founders to mingle together socially, and they seldom see each other outside the office. "But they act as a team beautifully, even though they quarrel like hell some of the time," says one close observer of the company.

Though Rodime's success might seem an encouraging omen for British high-technology entrepreneurship, some entrepreneurs viewed it privately as a lonely struggle against a conservative system which still seems to prize job security and a leisurely lifestyle above aggressive risk-taking. "Accountants in Britain tend to dwell on all the pitfalls of starting a new business," says Mr Brown, a qualified accountant himself.

There is disappointment, too, that local industry has not so far geared itself to supply more components. Most high-value precision parts, including heads, discs and electric motors, are bought from American and Japanese suppliers.

When Rodime went public last autumn, it chose the U.S. OTC market, on the grounds that it offered more liquidity and sophistication than Britain's fledgling Unlisted Securities Market. It has no plans to seek a listing in the UK at present.

Doubtless, it would all have been much easier in California. But Eastern Scotland, as well as being where the founders want to live, offers another important advantage — a stable labour force.

Unusually, in an industry rife with public relations razzmatazz, Rodime does not exactly court publicity. (Dr Brownlow, its chairman and managing director, declined to speak on the record for this article). Though the founders' original combined stake of less than £50,000 in the company is now worth almost \$40m on paper, several appear bemused and slightly embarrassed by their wealth.

Plotting future expansion is, in any case, absorbing much of management's time. Until recently, Rodime avoided going after really large orders because it lacked adequate production capacity. Now it is ready to stalk big U.S. manufacturers, including IBM, whose immensely successful personal computer operation is based just down the road from Rodime's site in Florida. It is also seeking more business in continental Europe, which currently accounts for only about 15 per cent of sales.

To spearhead its next growth phase, Rodime is counting on a new 3½-inch disc drive, no larger than a car radio. It announced the product last March, well ahead of its competitors, and recently entered production.

Rodime's lead, though of only a few months, should give it a critical head start in persuading computer manufacturers to adopt its drive as a standard. The company is ready for the orders when they come: it plans to build up production as fast as possible to 300,000-400,000 units a year—treble its recent output of 5¼-inch disc drives. Some of the machines will be made in the Florida plant after it comes on stream early next year.

Even now, however, the company is starting to think about the stage after that. "This isn't a business where you can start a product, run it for 20 years and you can then retire," says Mr Brown. "Youv'e got to keep bringing out new products or the old ones will die."

The third in an occasional series. Previous articles appeared on September 5 and 12.

Lombard

False alarms on UK economy

By Samuel Brittan

THOSE OF us who use radio alarms face a difficult dilemma. Do we have it tuned to the news and comment programme and risk waking up to a torrent of words on all too familiar subjects? Or do we instead tune in to Radio Three, the BBC's mainly music channel?

My personal compromise is to tune in to the music programme, but in time for the news summary, hoping to absorb it all subliminally. Unfortunately this compromise strategy has been spoilt for me by news summaries which, especially on a Monday morning, extract in half-baked form any pieces of bad news that can be found in "City" forecasts, to which ridiculously exaggerated importance is attached.

I suppose those who prepare these forecasts think they are dealing a cunning blow at Thatcherism, or fighting the battle for unreconstructed Keynesianism. Dr David Owen's speech at Salford had, by contrast, the outstanding merit of showing that it is possible to criticise the present British Government without infantile scaremongering. The main effect of the new bias is likely to be for me to shift the alarm five minutes forward so that I wake up to something pleasant, like a Haydn symphony.

Much more frequent than mere bias in the treatment of economic news is oscillation between optimism and pessimism. In early summer, following the Treasury's revised forecast of 2 to 3 per cent growth this year, the mood was optimistic. Then, following the fall in July retail sales and the June Industrial Production Index, together with those famous City forecasts, the pendulum swung to pessimism. Now that the July retail sales fall has been revised away by the statisticians and the July "Index of the Production Industries" shows a rise, a little more optimism is heard. "Good news for the Government" we are told—as if the health of the British economy were but a minor aspect of point-scoring in some imaginary continuing general election.

Fortunately, the actual economy does not oscillate as much as the monthly indicators. One of the first lessons I learned from my elementary statistics course in Cambridge was that the month-to-month behaviour of the production or sales index is far too volatile to be anything other than utterly misleading.

A more realistic interpretation of the Production Index is to say that output this summer has been 5¼ per cent up on the recession trough of early 1981 and has apparently been rising by about 2 per cent per annum. But overall interpretation is difficult because of the unusually large discrepancy between the expenditure measure of real GDP, which suggests a rise of 3¼ per cent over a year ago, and the output-based measure which suggests less than half that rise.

The best evidence for at least a modest recovery, apart from the profits and Stock Exchange revival, comes from the CBI survey and the unfilled vacancy figures. Industry's output expectations have shown a consistent, positive bias for seven months running, the first such experience since 1979.

It is of course possible that the moderate recovery will peter out next year; but this is not the view that is emerging from the Treasury forecasting exercise. Whitehall's greater optimism is based partly on indications of faster international recovery and partly on giving more attention to the recent growth of money, liquidity and corporate profits. Some of the more optimistic advisers can see 2½ to 3 per cent growth rates continuing right through to the end of 1984.

The main cloud on the horizon comes from the high real sterling exchange rate. The Government is still unpersuaded of the case for a stimulus either via a lower exchange rate or by fiscal means. But in current theology an interest rate drop is perfectly respectable and not regarded as "reflation."

The growth of the narrower measures of money is beginning to slow down enough to give the Government a fig leaf for dropping interest rates. But the real trigger will come when the U.S. dollar falls fairly sharply, which seems more and more likely. An interest rate cut will moderate sterling's rise against the dollar, while allowing it to fall against the continental currencies. But industry will suffer if we have to wait too long for all this to happen.

Letters to the Editor

Higher inflation—higher employment

From Mr H. Neuburger

Sir, — It was heartening to read (September 15) Samuel Brittan's tribute to Labour Party policy. The quibbles I want to raise may seem churlish beside the recognition that the U.S. has successfully followed some Labour Party recommendations on fiscal expansion.

Samuel Brittan is unable to decide whether it is fiscal or monetary stimulus which has brought about the expansion. While U.S. experience is not illuminating, UK experience is. The UK collapse of 1980-82 was accompanied by consistent overshooting of monetary targets far worse than the U.S. So monetary expansion by itself does not stimulate output.

While there may be troubles ahead for the U.S. economy, it has yet to show any clear signs of this. It has certainly not justified the fears of those monetarists who predicted that a large increase in the budget deficit would crowd out private expansion—pushing up interest rates and cause massive inflation. These things may happen, but they haven't yet. The only adverse effect so far is that predicted by Keynesians of a large balance-of-payments deficit.

Samuel Brittan described a debate between Friedmanites and the New York Fed. This centres round whether the non-accelerating inflation rate of unemployment (Nairu) is below the current level of unemployment or whether it is too uncertain to use. To those of us who do not believe in the concept at all, the debate is irrelevant. These doubts are well expressed in his last paragraph. Here he expresses the wish that wage settlements be more responsive to the level rather than the rate of change of unemployment. That is equivalent to the wish that Nairu is constant and independent of the rate of inflation. This view is unsupported either by the facts or by any rigorous appraisal of theory. In the absence of Nairu, the approach to a lower level of unemployment may cause inflation to accelerate, but there is no reason to expect such acceleration to continue once it is reached.

I am happy to accept the facts that wage settlements respond more to the change in unemployment. That way we can for a short run cost of higher inflation reach a permanently lower level of unemployment. Nothing Samuel Brittan says has reduced the likelihood that this would be the result of current U.S. policies or of a policy of expansion pursued in the UK.

Henry Neuburger

21, North Church Road, N.1.

A robust theory

From Mr G. Wood

Sir,—In his widely ranging letter (September 13) Austin Mitchell, MP, was rather critical of Samuel Brittan's analysis of the consequences of a subsidy to mortgage borrowing. It should first be pointed out that aside from the analysis Mr Mitchell agreed with Samuel Brittan that the mortgage subsidy should be abolished. But that conclusion emerged from the air. The first part of his letter dealt with exchange rates—and contained a confusion, a misrepresentation of a previous author, and an assertion about a testable proposition in conflict with all the evidence on that proposition.

Samuel Brittan's argument relied on the law of one price —which says that the same goods trade at the same price everywhere (apart from transport costs and, where relevant, tariffs). Otherwise arbitrage would be profitable, and would occur. Austin Mitchell confused that with the purchasing power parity theory of exchange rates, which says that on average exchange rates will stand at a level so that when measured in any one currency, different countries' price levels are equal one to another. The law of one price can be one of the mechanisms to bring about that exchange rate relationship, but it is neither the only mechanism nor identical with the relationship.

Austin Mitchell quoted Jacob Viner in his support—but only by misrepresenting him. Viner passed two strictures on Cassel (who adumbrated purchasing power parity theory in its baldest form). First, Viner expressed some reservations about the comparability of different nations' price indices. Second, he complained that Cassel had neglected what Viner repeatedly termed "minor" factors. A quotation makes the point. Viner first quotes Cassel: "The art of economic theory to a great extent consists in the ability to judge which of a number of different factors co-operating in a certain movement ought to be regarded as the most important and essential one . . ." Immediately following the quotation from Cassel, Viner writes, "No objection can be made to this, if it is to be understood to mean that minor factors should be treated as minor factors." His objection to Cassel was not that the focus of Cassel's analysis, purchasing power parity, was totally wrong; but that in focusing exclusively on that, Cassel had neglected other, "minor," factors.

The test of a theory is how well it works. The theory has been tested extensively in recent years. It works to different degrees of accuracy at different times and for different countries. But it does so for reasons consistent with the theory—tariffs have changed dramatically, monetary policy has been variable to different extents at different times, and so forth.

The purchasing power parity theory of exchange rates is not, and is not intended to be, a short run exchange rate predictor. It is a statement of a long run tendency. Viewed as that, it is robust, and no amount of wishful thinking can falsify it.

Geoffrey E. Wood,
Buckmaster and Moore,
The Stock Exchange, EC2

An SDP tax proposal

From Mr D. Lindsay

Sir,—The SDP proposal to abolish the married man's tax allowance—without, at the same time, abolishing aggregation—*would result in:—many* more poor families already on the bread line being sucked into the tax net; even greater pressure on married women now running their homes to seek employment and add to the numbers unemployed; and increasing the already substantial tax bias against marriage.

It is hard to imagine anything more likely to kill off a fledgling political Party than the passing of ill-considered resolutions of this sort. If it had suggested, instead, the phasing out of the thoroughly irrational mortgage interest relief, one would certainly have had to sit up and take notice.

David G. Lindsay
36 Orchard Coombe,
Whitchurch Hill,
Reading, Berks.

A lawyer is necessary

From Mr W. Jones

Sir,—Mr J. H. Pratt's letter (September 13) about conveyancing is based on a fundamental misunderstanding of his subject.

The only way that his argument can be sustained is by accepting his assumption that conveyancing is in some way unrelated to the remainder of the law which governs our community and therefore it is not necessary to have a qualified lawyer to undertake such work.

This view is, of course, wholly erroneous. It should not be forgotten that conveyancing is legal work related in many of its aspects to the rest of the legal system. It can be relatively straightforward or very complicated but it does take a sufficiently well-qualified person to tell the difference.

But it is when Mr Pratt seeks to justify his view by reference to consumer benefits that his argument cannot withstand critical examination. (He makes a reference to "non-solicitor conveyancers" but does not describe them any further in his letter and does not explain what he means by this description.)

I would suggest that once Mr Pratt accepts that the consumer should be protected, any system of non-solicitor conveyancers which would allow them to operate would at least have to: provide an insurance indemnity; measure efficiently the competence of the conveyancer; protect client's money; and set up a code of conduct and a governing body to enforce that code.

In other words, a system to all intents and purposes now obtains except that those less *qualified than solicitors would* be allowed to operate. He does not explain how this would be of benefit to the consumer about whose welfare he professes such concern.

I am not surprised that the Royal Commission on Legal Services came to a different view than that held by Mr Pratt. Admittedly, it did have time and government financial backing to ensure that the subject was thoroughly investigated. But I would have hoped that in considering the matter, Mr Pratt would have applied some thought to the subject on the basis of *available facts and* not upon suppositions.

W. Jones,
Orchard Cottage,
Sheviock, Cornwall.

FINANCIAL TIMES

Monday September 19 1983

Terry Byland on Wall Street

Retailers remain depressed

WALL STREET'S retail stocks have been the one casualty area of the market correction phase which has failed to regain the ground lost last summer. While the stock market as a whole has again been testing its peak levels, retail stocks have remained stubbornly depressed, sometimes by as much as 25 per cent from their 12-month highs.

Despite the recovery in consumer confidence early in the summer, and despite excellent sales figures from the major store groups, retail stocks began to slip in July and have made no recovery since.

The reasons for the sector's relative lack of popularity are not hard to identify. "We've seen all the good news," commented one analyst. "The results for the second quarter will probably be the best until we reach the next post-recession phase." Cynical, perhaps, but there you are.

Now that the U.S. economy seems set for a period of more moderate growth, institutional investors are turning their attentions towards the cyclical industrial stocks, which are likely to benefit from restocking and capital investment by industry. Such a mood is discouraging for retail stocks because they are heavily held by the institutions – probably about 50 per cent of the stock is in the portfolios of the institutions. As fund managers look to other share sectors to provide them with continued growth, retail stocks have run into selling.

Among the chain stores, Sears and J. C. Penney are each now more than 17 per cent off their peaks and Woolworth almost 9 per cent down.

The picture is much the same in the other areas of the retail share sector, with Toys R Us, the nation's favourite toy seller, 8 per cent off its 12-month high, and the department store groups showing falls of 13 per cent in the case of Allied Stores and nearly 20 per cent for Macy.

Some Wall Street brokerage houses are beginning to question whether the falls have been overdone, or have at least opened up bargain buying opportunities.

The sector is still looking at some extremely favourable earnings forecasts. L. F. Rothschild Unterberg Towbin, which compiles indices for the retail share sectors, predicts that the chain stores will increase earnings by an average of 33.3 per cent this year, and 19.13 per cent in 1984. For department stores, the predictions are for 25 per cent this year and 14.5 per cent next year.

With industrial unemployment possibly peaking out in the U.S., the retail trade might be in for more growth than the profit-takers in the market have bargained for. And the recent fall in stocks have put some of the major retailers on to price/earnings ratios which are very attractive, especially when measured against some of the basic industrial sectors, which have yet to bring home the bacon in terms of higher profits and dividends.

J. C. Penney, for which analysts forecast a rise of 15 per cent in share earnings this year and a further 19 per cent gain next year, currently sells on a price/earnings multiple of 11.

K Mart, on an historic p/e of 13, has attracted forecasts of an 8 per cent rise in profits this year and a 23 per cent gain in the following year. Dayton Hudson, on a 15 per cent historic p/e, is expected to produce a 21 per cent gain this year and a further 25 per cent in the following 12 months.

In their haste to spot the next growth sector, some investors may have overlooked the strength still left in retail stocks. The next 12 months could see some strong upturns in retails share prices as the predicted profit gains are compared with those of other share sectors.

SOVIET OFFICIAL HINTS AT MOVE ON MILITARY DECISIONS

Andropov may tighten controls

BY JOHN HUNT IN EDINBURGH

A STRONG hint was given yesterday by a senior Soviet official Prof Viktor Afanasiev, editor-in-chief of Pravda, that Soviet leader, Mr Yuri Andropov, will try to gain firmer political control over military decisions to prevent another incident like the shooting down of the South Korean airliner.

Prof Afanasiev's presence in Britain as part of a high level Soviet delegation has brought angry protests from Conservative Members of Parliament, who will raise the matter with Sir Geoffrey Howe, the Foreign Secretary, when Parliament resumes on October 24.

The visit which started in Edinburgh yesterday came a day after Mrs Thatcher condemned the "totally inexplicable and incomprehensible" failure of Britain's Common Market allies to react strongly enough to the shooting down of the airliner.

Prof Afanasiev, when asked whether the incident showed lack of political control over the military and if steps would be taken to rectify this, replied:

"I think our Government and party will draw some conclusions – political conclusions – and do something of that kind."

Prof Afanasiev is close to Mr Andropov and is a full member of the Communist Party Central Committee. He declared: "I have no particular feeling of pride in the fact that our pilot shot down the airliner. In present day conditions it is not very difficult to do it. It is an elementary task."

The Soviet group of military and foreign affairs experts are meeting their British and American counterparts at Edinburgh University as part of the "Edinburgh Conversations." They started in 1980 and are a forum for non-governmental contact between East and West.

Mr John Wilkinson, Conservative MP and a vice-chairman of the Conservative backbench defence committee, said last night that the visit was totally inappropriate and the visas of the Soviet party should have been revoked.

"It gives the Russians the impression that they can get away with this kind of behaviour with immunity," he said.

However, it was stressed in government circles that the occasion was an academic one and not a governmental one. No serving British military personnel were taking part.

The Soviet delegation, which avoided the ban on Aeroflot flights by coming via Belgrade, include Mr Djavad Shariff of the Central Committee's international department; Major-General Konstantin Michailov, a senior defence diplomat, and Dr Valeri Samenov of the Soviet Foreign Ministry.

British members include Sir Hugh Beach and Vice-Admiral Sir Ian McGeoch, who formerly held senior defence posts.

Gromyko visit to UN, Page 2

Argentina and Paraguay sign agreement on dam contract

BY JIMMY BURNS IN BUENOS AIRES

THE ARGENTINE and Paraguayan Governments, which are jointly developing the $10bn Yacyreta hydroelectric project on the Parana River, have signed a joint agreement confirming the award of a $1.6bn civil works contract to a European engineering consortium led by Dumez of France and Impregilo of Italy.

In Buenos Aires, the agreement was described as an essential step leading to an early start-up of the main work on the dam. According to the Argentine Minister of Public Works, Sr Conrado Bauer, the main civil works in which the consortium will be involved could begin in December, one month later than the last date scheduled by the Government.

However, some trade sources have not ruled out the possibility that a final decision on the project may be delayed because continuing political uncertainties in Argentina are blocking any major administrative initiative, apart from those directly connected with the foreign debt negotiations.

Argentina is holding its first democratic elections after seven years of military rule in October 30, and will face a delicate transition period until January 30, when the new civilian authorities will take over government.

This weekend's inter-government agreement settles a major argument over the exchange rate calculations for the financing of the project. It supports a letter of intent from the joint company formed for the hydroelectric project, which earlier this year awarded the contracts to Dumez and Impregilo. The awards ended three years of competition between Dumez, one of France's largest construction companies, and the Impregilo group, a consortium of Italian civil engineering companies controlled by Fiat.

Trade sources, however, yesterday pointed out that the signing of the final contract with Dumez and Impregilo originally expected to take place on July 15, was facing delays while some details were agreed – although the contract is understood to have been broadly accepted by the project's two main creditors, the World Bank and the Inter-American Development Bank. The two institutions have agreed to lend $210m each.

In a related development, there appear to have been continuing delays in the award of the main turbine contract, worth an estimated $172m. Allis Chalmers of the U.S. has been asked to revise its plans to construct 20 turbines to facilitate greater participation of Argentine and Paraguayan companies. Pressures on Allis Chalmers to surrender more of the work have been casting doubts on a $550m loan offered originally by the U.S. Export-Import Bank.

Yacyreta has a projected capacity of 4,700 megawatts with the electrical output going to Argentina in the initial years. Once built, it will be the second largest dam in the world.

Renault to produce new truck in Britain

By Kenneth Gooding in London

RENAULT of France is to assemble a second heavy truck range at its British plant in Dunstable, Bedfordshire.

The group has designed a high-powered, 16-tonne truck specifically for the UK market (vehicles of this gross weight are not in demand in Europe) and it will go into production early next year.

It will follow closely the G260, 38-tonner which Renault will also build in Dunstable at Karrier Motors. Pilot production will begin in November, followed by full output in February. The aim with both models will be eventually to use as many British parts as possible.

Renault acquired a half-share in Karrier from Peugeot two years ago and by the end of this year will lift its shareholding to 90 per cent following a major reorganisation of the former UK Dodge Trucks company.

The addition of further Renault-badged vehicles to be made alongside the Dodge trucks at Dunstable is part of a process which M Laurent Brisset, Karrier's chairman and managing director, says will lead Renault to "become as natural a part of the British motor industry as Ford or General Motors."

BL, the state-owned UK vehicle manufacturer, will show a considerable improvement in its half-year results, due to be published on Friday. See Page 8

Karrier says production levels of the 16-tonner, called the G170, will be about the same as those for the G260, roughly 250 a year.

Investment at Dunstable to pave the way for the introduction of the Renault models will be less than £3m because the plant is already well equipped and modern. Production of the new trucks will not boost jobs either – the 900 production workers at Dunstable will continue on short time until next April.

The G170 will replace another Renault 16-tonne truck, the GF 151, which is made at Blainville in France. Karrier already has a 16-tonne Dodge truck in its range but maintains the G170 will not duplicate it because the Dodge is a medium-powered vehicle.

The G170 is based heavily on the GF 151 and will have a 170hp diesel engine developed from the Renault unit used in the Mack Midliner medium-duty truck, built in France but sold by Mack Trucks in the U.S. Renault also has 45 per cent and management control of Mack.

Full details of the G170, together with a pre-production vehicle, are to be at the Scottish Motor Show in November.

North Sea oil may stay at $30

BY RICHARD JOHNS IN LONDON

THE British National Oil Corporation (BNOC) is set to begin, belatedly, serious talks this week with its suppliers and customers on the North Sea oil price for the fourth quarter.

The indications are that BNOC will propose an unchanged reference price – currently $30 a barrel for Brent Blend – after Thursday's meeting in Vienna of the Organisation of Petroleum Exporting Countries (Opec) market monitoring committee.

It recommended the ceiling on collective Opec output should should stay at 17.5m b/d and with the actual rate running at about 18.5m b/d, urged members to respect their individual quotas.

Equally important for BNOC and North Sea producers, the committee made no move to persuade Nigeria to raise the price of Bonny Light, its top quality crude which is also at $30 to the level of comparable Algerian and Libyan varieties at $30.50. Any upward adjustment by Nigeria would have put BNOC under some pressure to follow suit.

The four-man ministerial committee chaired by Dr Mana Said al Otaiba, the United Arab Emirates' (UAE) Oil Minister is understood not even to have discussed the question. Mallam Yahayu Dikki, Nigerian chief delegate, had been expected to attend the meeting as an observer but in the event only sent a representative.

If members were to respect the overall limit and their quotas, the upward pressure on prices could be strong because demand for Opec oil in the October–December period could be slightly in excess of 19m b/d according to the most recent forecast by the International Energy Agency.

Meanwhile, on the spot market, where trading has admittedly been thin, rates for higher quality North Sea and African crudes has been slipping.

At the end of last week for instance, Brent Blend was $30.30 compared with $31.30 early in August. This deterioration has weakened the argument of many North Sea producers, particularly those with no refining and marketing interests, for an increase of 50 cents a barrel.

At the same time BNOC will continue to resist the case being pressed by Esso – Shell's partner in the Brent operation – that oil from the field is unfairly penalised by being priced 25 cents above crude from British Petroleum's Forties.

U.S. and Syria nearer conflict

Continued from Page 1

However, Mr Jumblatt stated that a ceasefire would not be possible until the Lebanese army agreed to "move out of the mountains," where the Druze forces are concentrated. There could be no agreement until then because "we do not trust the Lebanese army."

The bombardment of Syrian-controlled areas, nevertheless, has fueled Lebanese Government hopes that it can get continued U.S. military action in support of its overstretched 32,000-strong army.

In another move that will encourage Lebanese claims that the conflict is already more than a civil war embracing "outside" forces, the Libyan Government said yesterday that its forces stationed in Lebanon, thought to number between 200 and 300 troops, have been placed at the disposal of the Syrians.

Meanwhile, Mr Yassir Arafat, the Palestine Liberation Organisation leader, returned secretly to Lebanon for the first time since he was expelled from Syria in June. He was reported to have received an emotional welcome from guerrillas and refugees in northern Lebanon.

M Charles Hernu, the French Defence Minister, said France was making every effort to involve the international community in the task of restoring the sovereignty of Lebanon. He said a UN peacekeeping force would act as the "driving force" to any solution in the Lebanese crisis.

Despite the UN Security Council's failure on Friday to agree on a proposed resolution calling for a ceasefire, M Hernu said consultations were still taking place that could lead Lebanese President Gemayel to take "certain initiatives within the Council framework."

M Hernu stressed, however, that the French troops already stationed in Lebanon under the multinational peacekeeping force which also comprises troops from Britain and Italy would remain exclusively under French command. This would exclude concerted military action with the other members of the force, except in joint operations of a humanitarian nature.

Battles continued yesterday in and around the town of Souq al Gharb on the ridge line above Beirut with both sides reported to have suffered heavy casualties.

Investment suffers as HK$ falls

Continued from Page 1

trade-weighted index for the month stood at 88.3.

Further weakness in the Hong Kong dollar may present a dilemma for the cartel of banks that controls local interest rates. The cartel raised interest rates on September 9 by 1½ percentage points, to put base lending rate at 13 per cent. No change was made to interest rates at the cartel's regular meeting on Saturday.

The banks' choice now is between raising interest rates further to support the currency and thereby threatening economic recovery, or leaving interest rates low, at the risk of accelerating the inflationary effects of a weak currency.

The Financial Secretary's review was confident about Hong Kong's prospects for export-led recovery this year.

World Weather

		°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	S	22	72	Dubrovnik	S	19	68	Malaga	S	26	79	Salzburg	F	15	59
Akrotiri	S	28	82	Faro	S	23	73	Malta	S	27	81	Seoul	S	29	84
Algiers	S	28	82	Florence	S	24	75	Manila	C	34	93	Singapore	R	30	88
Amsterdam	C	12	54	Frankfurt	F	17	63	Miami	S	27	81	Stockholm	R	15	59
Athens	S	28	82	Funchal	C	23	73	Milan	S	23	73	Strasbourg	F	20	68
Bahrain	S	33	91	Geneva	S	17	63	Moscow	S	16	61	Sydney	F	20	68
Bangkok	–	—	—	Gibraltar	F	25	77	Munich	C	14	57	Taipei	S	33	91
Barcelona	F	23	73	Guernsey	R	13	55	Nairobi	F	27	81	Tangier	S	29	84
Beirut	–	—	—	Helsinki	C	8	64	Naples	S	21	70	Tehran	–	—	—
Belgrade	R	12	54	H. Kong	S	32	90	New Delhi	S	36	97	Tel Aviv	F	29	84
Berlin	F	17	63	Innsbruck	S	16	61	New York	S	17	63	Tenerife	S	25	77
Biarritz	S	24	75	Inverness	F	10	50	Nice	S	24	75	Tokyo	C	22	72
Blackpool	S	16	61	Istanbul	S	30	86	Oporto	C	19	66	Toronto	F	12	54
Bordeaux	S	21	70	Jersey	D	16	61	Oslo	C	17	63	Tunis	F	27	81
Brussels	C	14	57	Jo'burg	S	26	79	Paris	C	18	61	Valencia	C	29	84
Budapest	R	14	57	Las Palmas	C	24	75	Prague	F	18	64	Venice	S	20	68
B. Aires	–	—	—	Lima	C	21	70	Reykjavik	C	9	48	Vienna	F	17	63
Cairo	S	32	90	Lisbon	F	21	70	Rio de J'o	C	27	81	Warsaw	C	16	61
Cape Town	C	16	61	Locarno	S	21	70	Rome	S	25	77	Zurich	F	16	61
Caracas	–	—	—	London	R	15	59								
Casablanca	S	24	75	Los Angeles	C	19	66								
Copenhagen	–	—	—	Luxembourg	C	14	57								
Corfu	F	21	70	Madrid	S	27	81								
Dublin	S	10	50	Majorca	C	26	79								

Readings at mid-day yesterday:

C–Cloudy D–Drizzle F–Fair Fg–Fog H–Hail R–Rain S–Sun Sl–Sleet Sn–Snow T–Thunder

North Sea gas deal

Continued from Page 1

stall an unmanned production platform on each of the three fields. The platform on the Esmond Field is likely to be connected by a bridge to a central production platform which will also carry accommodation for between 50 and 60 offshore workers.

The Forbes and Esmond fields will probably be connected by a six-mile-long pipeline of 10 inches diameter.

Licensees in the fields, which lie in the Bunter geological structure, are:

- Esmond (block 43/13a) – Hamilton Brothers (12 per cent), Hamilton Oil (48 per cent), RTZ Oil and Gas (25 per cent), Blackfriars Oil (12.5 per cent), and Trans European (2.5 per cent);
- Forbes (block 43/8) – Hamilton Brothers (11.25 per cent), Hamilton Oil (45 per cent), RTZ Oil and Gas (23.4375 per cent), Blackfriars Oil (11.7188 per cent), Whitehall Petroleum (4.6875 per cent), Trans European (2.3437 per cent), and Rycade (1.5625 per cent);
- Gordon (43/15 and 43/20) – Hamilton Brothers (12 per cent), Hamilton Oil (48 per cent), RTZ Oil and Gas (25 per cent), Blackfriars Oil (12.5 per cent), and Trans European (2.5 per cent).

THE LEX COLUMN

A leaden light on metals

The clatter of base metal prices last week – when the London copper price fell by about 5 per cent – dealt out a reminder that the economic recovery is turning into a rather patchy and halting affair. Even a prolonged consumer boom on both sides of the Atlantic is being translated very sketchily into capital investment, and the knock-on demand for primary materials seems to be more tenuous still.

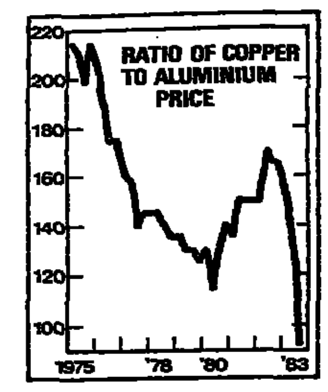
In contrast to the last cyclical boom four years ago, when all the base metal prices peaked more or less at once at the start of 1980, demand for metal this year has been selective, with a marked bias towards those with the greatest direct input to the consumer goods sector. Aluminium, with its high sales to the automotive industry, has been one of this year's resurrections, while the nickels and molybdenums which go primarily into heavy capital items – such as nuclear reactors – remain inert.

This new selectivity may not be the only sign of changed behaviour patterns in the metal exchanges, increasingly integrated these days with other commodity and financial markets. One reason for the latest fall in metal prices may have been migration of speculative interest towards the soft commodity pits in the commodity futures exchanges during recent weeks as the effects of an overheated summer worked their way into rising prices for fibres and foodstuffs.

Yet there has not been an untroubled rise even in those commodities where shortages have been most confidently forecast, such as potatoes and grains. It may be that all these markets – metals included – have been suffering the consequences of tighter monetary conditions which have taken hold internationally since the summer. Nor is it a trivial point that portfolio holders of metal have been sitting for months on some tidy but steadily eroding profits – which are now being taken.

Industrial users of metal, on the other hand, have been unwilling to take on the depth of material stocks which they typically carried into other upturns of production. Despite a fractional easing in real interest rates, there is an accumulation of evidence for a once-off change in attitudes – against stockbuilding.

It is more doubtful whether this new-found distaste for holding



stocks would apply to "strategic" materials, particularly if the markets seemed to be tightening. At present, though, it is hard to persuade consumers of base metals that they should be salting them away while the market is still weak; more of the industrial consumers still seem to be holding off on the slightly paradoxical grounds that the stuff's still too cheap to be worth buying.

Moreover, the long-term drift to lower use of metals in each unit of industrial output stands to limit the scope for recovery. Lead has been a disaster area this year despite booming car production. And although copper may regain some ground from aluminium, as aluminium costs rise in the next few years, consumption of copper in 1983 has been running about 3 per cent below even the weak 1982 offtake, and producers' stocks are still on the march.

Hanson Trust

The pattern of the largest two takeovers in the UK this year was, in retrospect, remarkably similar. Both UDS and Thomas Tilling struggled, and failed, to defend their use of shareholders' assets against industrial holding companies with an established and distinctive management record. As soon as the successful bidders moved their calculators into the defeated companies' offices, however, the stories parted company.

To judge by last week's interim report from BTR, the highly heterogeneous portfolio of Tilling companies is to be kept almost wholly intact, despite the obvious advantages to BTR of selling assets to reduce a debt load not far short of its net worth. Even Cornhill Insurance, hardly a "contiguous" business, now looks set to remain within the BTR fold.

Hanson Trust, by contrast, inherited a company which, while earning a miserly return on its assets, did at least seem founded on some commercial logic. And the financial burden of its inheritance was nothing like as severe as at BTR. Hanson's balance sheet traditionally contains a heavy slug of convertible and long-term loan capital but, before the UDS offer, it sported virtually no net short-term indebtedness.

The cash element of the UDS purchase was £85m – out of a total value of around £260m. This outlay will be covererd with £20m to spare by the management buyout of John Collier and Richard Shops. And, to judge from the urgency of these transactions, Hanson may be hoping to credit the £40m proceeds of the sale of the Timpson shoe chain by the time it closes its financial year at the end of next week.

Hanson is understandably sensitive about the charge that the purchase of UDS was disguised rights issue. It has deflected criticism of a potentially more emotive kind – that it is asset stripping – by arranging both disposals in the form of a management buyout.

The practice of restricting the cash element of a bid and then funding even that through disposals is nothing new at Hanson. Roughly half the £95m takeover of Berec was in cash form, almost all of which was subsequently made up in disposals.

Hanson can certainly argue that the retail assets of which it is disposing would fail to meet the return on capital criteria which it applies across the group. That, however, must have been obvious from the start. The Allders department stores will probably fit better in to the Hanson portfolio, but it is hard to imagine that the home shopping division, for example, will meet all the Hanson yardsticks.

The Timpson chain is being sold in a relatively buoyant retail property market and Hanson is presumably well satisfied with the price. But it might have been more effective – and certainly more straightforward – for Hanson to have forgotten UDS and raised the cash directly from the market.

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SECTION II - COMPANIES AND MARKETS
FINANCIAL TIMES
Monday September 19 1983

ENI MOVE PRESAGES MARKET SHIFT

Domestic appeal for Italian borrowers

BY RUPERT CORNWELL IN ROME

COULD the eminently successful – and unprecedentedly large – domestic lire financing arrangement for Eni earlier this month point to a relative shift in the attention of potential Italian borrowers from the international to the national capital market?

The question is being asked in the wake of the L1,000bn ($625m) package put together by 84 banks, led by the Banco di Roma, on behalf of the publicly owned energy agency. Such indeed was the welcome given to the planned facility – L675bn as a straight financing and the remainder as a stand-by credit – that its amount was doubled from an initially envisaged L500bn.

The Eni operation, the largest of its kind carried out in Italy, follows on the heels of an offering of L150bn worth of five-year bonds in Milan by the Montedison chemical group, which was oversubscribed before lists even formally opened.

The appeal of this flotation undoubtedly reflected in part the much more positive view investors are now taking of the long-troubled Montedison. But it also is a measure, as was the outcome of the Eni financing, of the comfortable liquidity position of the Italian banking system.

But if there is a conscious shift from abroad to home as a source of finance, external considerations may not be without influence. Not least the extreme unpredictability of the dollar, in which some 70 per cent of Italy's total foreign debt is estimated to be denominated.

The most recent figures show that the country's total foreign debt had risen to $55.5bn by August, compared with $50.98bn at the end of 1982. Much of the increase appears to be at the short-term end, particularly in the months of April and May when opinion – later to be proved erroneous – was hardening that the days of the dollar's ascent were ending. The reverse, however, has been true.

The lira is presently standing at around 1,600 to the dollar and the recent sharp oscillations in the rate around an underlying upward trend have removed much confidence that future trends can be predicted. The comparative absence of Italian borrowers on international markets is perhaps an indication of this understandable wariness about the course of the dollar.

However, it also may well be a consequence of a distinct improvement in the country's external financial position. True, total foreign indebtedness has risen. But, according to the UIC, the Italian foreign exchange office, the repayment profile is very even, ranging from $4.3bn next year to a high of $6.9bn in 1987, before falling back to $5.2bn in 1988 and a total $10.9bn in the years thereafter.

In any case, the signs are that the country needs to look less abroad for its financial requirements. In 1982, the current account deficit reached L7,400bn ($4.6bn), but for the first part of this year current payments were in rough balance.

A flat economy (latest projections are for a 1.2 per cent decline in real gross domestic product in 1983) is likely to mean that the pressure from imports will remain low. The main threat is the cost of the dollar in which those imports (particularly oil and other raw materials) are billed.

The latest balance of payments figures issued by the Bank of Italy indicate a substantial and most favourable turnround. Both June and July saw massive surpluses, and this has been extended by a provisional L1,511bn surplus in August. The improvement is borne out by the growth in official reserves, to L72.049bn (almost $45bn) at the end of August, of which gold accounted for slightly over $25bn and convertible currency holdings in excess of $10bn.

MYOPIC VIEW OF MONEY SUPPLY BLURS EUROMARKET VISION

Europeans snared in M-1 trap

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

ONE OF the worst – and most mentionable – vices of dealers in financial markets has always been their tendency to become obsessed with particular news developments to the exclusion of everything else.

Last week this syndrome hit the Euromarket with a vengeance as bond dealers doggedly ignored several positive indicators to give full vent to their worries over a looming bulge in the U.S. money supply and this week's large $14.25bn U.S. Treasury funding programme in New York.

No matter that the week began with news of an unexpected $2bn drop in the M-1 money supply and that U.S. retail sales fell by 1.4 per cent in August. In a less neurotic market such developments would have aroused immediate expectations of a fall in interest rates and bond prices might have rallied.

Last week the market refused to go up and that was that. Said a dispirited West German banker on Friday: "We used to regard money supply watching as a curious American habit. Now it is spreading to Europe. It's idiotic but true."

But when markets reach this pitch of obsession there is also a great danger that their reactions become capricious und unpredictable. An objective observer might well have been fooled on Monday into assuming that Eurodollar bonds were ripe for a rally, but it was a trap for the unwary and Citicorp fell headling in with its $100m, 11¾ per cent bond issued at par by Credit Suisse First Boston, Citicorp and Merrill Lynch.

Almost as soon as the Citicorp issue was announced the Eurobond market resumed its decline and the low coupon on the bond stood out like a sore thumb. There has been a surfeit of bank borrowing on the Eurobond market this year and these two factors helped the issue to slump to a discount of 3¼ points by the close of business on Friday.

Last week's other bank issue, the $80m bond for Sanwa launched on Wednesday, fared rather better closing at a discount of only 1¾, but this issue was at the other end of the coupon spectrum with a generous 12.431 per cent offer yield.

For investors in Eurobonds the market has become a minefield. If the market failed to advance after an unexpected drop in money supply last week, could it rally this week after a slightly less than expected rise of $5.5bn announced on Friday night? For the moment there is no way of knowing and as a result investors have virtually retreated to the sidelines, leaving turnover to dwindle and prices to stagnate.

At the end of the week there was some sporadic buying of high coupon issues at their lowest levels, but for the week as a whole price changes in all major sectors of the Eurobond market showed only minimal fluctuations.

New issue volume is also down on European Continental bond markets. In West Germany the lone new issue last week was a debut bond for Beatrice Foods, which attracted support despite a low coupon of 7¾ per cent. Investors found the U.S. corporate name appealing and the bonds closed on Friday at a marginal discount of ½. Today, Deutsche Bank is expected to bring the third issue in this month's calendar in the form of a DM 200m bond for Electricité de France.

One sector which did show some life last week was again that for floating rate notes which offer investors some protection against interest rate movements. Credit Suisse First Boston launched a $250m FRN for Indonesia on Monday. This is not a particularly strong name for the bond market but the issue was fairly well received, trading on Friday at a discount of 1½ points, within its total fees of 1¾.

Similarly the World Bank's first Euro-Canadian issue was well received with its 12¼ per cent coupon. This is the World Bank's first borrowing in Canadian currency for 12 years so the borrower is a very rare name.

Its decision to switch to Canadian dollars partly reflects the virtual elimination of the interest differential between Canadian and U.S. currency, but some dealers also attribute it a broader significance.

In today's market borrowers have to offer something special to lure investors back. While the World Bank was tapping the Canadian market on Tuesday, the European Investment Bank launched a run-of-the-mill issue in the U.S. dollar sector. Those 11⅞ per cent bonds were stuck at a 2½ point discount at the end of the week.

INTERNATIONAL CREDITS

Brazilian creditors wary of fresh loans

BY PETER MONTAGNON

COMMERCIAL banks are coming under pressure to resume loan disbursements to Brazil now that the Government has signed its letter of intent to the International Monetary Fund (IMF).

The banks stopped disbursing their $4.4bn loan to Brazil in May at the same time as the IMF said it would withhold fresh lending until a new economic austerity programme was in place.

Last week's delivery to the IMF of the new letter of intent setting out economic policy targets marks an important step forward in this respect and has paved the way for serious talks on a new debt rescue package of up to $11bn.

But as the 13-bank Advisory Committee, chaired by Citibank, met last Friday in New York with Brazilian officials and observers from leading central banks, a particularly pressing preoccupation was how to keep Brazil afloat until the new package was ready for payment, which could still take several months.

Some of the central banks had factored into their calculations an immediate resumption of disbursements by commercial banks as soon as the IMF letter of intent was signed, but the Fund itself will not resume lending until its Executive Board has approved the new Brazilian programme in late October.

Meanwhile the Federal Reserve is understood to have told Brazil there is no prospect of a bilateral bridging loan from the U.S. at least for the time being.

The commercial banks are naturally reluctant to go out on a limb and become the first to resume lending to Brazil. Even if they did so Brazil's immediate commitments would take up all but about $500m of the outstanding balance of the $4.4bn loan, which would still leave the country with substantial arrears on the crucial September 30 balance sheet deadline for U.S. banks.

Relief in the Eurocredit market that Brazil had finally agreed to swallow IMF medicine was thus mitigated last week by the prospect that it may be some time before debt service arrears now exceeding $2bn can be reduced to manageable proportions.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
Yamanouchi Pharm. §	50	1990	7	4	100	Nikko Secs	*
Citicorp ‡	100	1990	7	11¾	100	CSFB, Citicorp, Merrill Lynch	11.750
EIB ‡	150	1993	8¼	11⅞	100	SBCI, BNP, Deutsche Bank	11.875
KEPCO †‡	50	1993	10	5¼○	100	BA Asia, LBI	–
Isveimer †‡	50	1990	7	5¼○	100	Nomura Intl.	–
Sanwa ‡	80	1990	5	12⅜	99¾	Morgan Gty., Sanwa BK., Baring Bros., Morgan Stanley	12.431
CANADIAN DOLLARS							
World Bank ‡	75	1990	7	12¼	100	Wood Gundy	12.250
D-MARKS							
Beatrice Foods ‡	130	1993	10	7¾	100	Deutsche Bank	7.750
SWISS FRANCS							
Tamura Seisakusho **§‡	35	1988	–	3½	100	SBC	3500
Ibiden **§‡	25	1989	–	3⅜	100	SBC	3.375

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
SWISS FRANCS							
Hanwa Co. **§‡	80	1989	–	3½	100	Banca del Gottardo	3.500
Fujikura **§‡	40	1989	–	3⅜	100	UBS	3.375
Council of Europe ‡	100	1993	–	6⅛	100	Banca del Gottardo	6.125
Hydro-Quebec **‡	100	1990	–	6	100	SBC	6.000
Kyushu Electric Power **‡	100	1988	–	5⅞	99½	SBC	5.994
EEC	100	1993	–	*	*	CS	6.000
GUILDERS							
Ned. Middenstandsbk. **‡	100	1988	5	9	100	NMB	9.000
YEN							
Bk. of Greece **‡	5bn	1998	5½	8.6	99.60	LTCB, Sumitomo Tst. and Banking Co.	8.825
CNE **‡	5bn	1993	9	8.5	100	Nikko Secs.	8.681

* Not yet priced. ‡ Final terms. ** Placement. † Floating rate note. ○ Minimum. § Convertible. Note: Yields are calculated on AIBD basis.

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

U.S. BONDS

Short-term worries weigh heavily on Wall Street

SHORT-TERM worries about the expected bulge in the money supply figures in early September and the market's ability to digest this week's treasury "mini-refunding" dominated the psychology of the U.S. credit markets for much of last week. After the previous Friday's late jump in bond prices, following the news of a surprise $2bn fall in M1, U.S. bond prices drifted lower for most of last week. By Thursday evening the government's 12 per cent 30-year long bond had fallen by more than two points to 102 and the government's 11⅞ per cent notes, due 1993, had dropped 1¾ points to 100⅜.

There was less movement in short-term money rates with three month treasury bills fluctuating between 9.04 and 9.10 all week. The Fed funds rate showed some firmness but *the U.S. authorities were fairly* liberal in supplying reserves to the banking system through system repos and an outright *purchase of bills.*

U.S. INTEREST RATES (%)	Week to Sept 16	Week to Sept 9
Fed funds wkly aver	9.54	9.53
Three-month CDs	9.52	9.55
Three-month T-bills	9.08	8.96
30-year Treas bond	11.77	11.73
AAA Utility	12.75	12.75
AA Industrial	12.75	12.75

Source: Salomon Bros (estimates). In the week ended September 7 M1 rose by $5.5bn to $518.5bn.

Aubrey Lanston notes in its weekly market letter that the market "retreated into a gloomy shell that seemed impenetrable" for much of last week. On Friday, U.S. government issues staged a modest rally ahead of the money supply figures but when these were released—M1 rose by $5.5bn — all the earlier gains were wiped out and the market finished the week on a gloomy note in sharp contrast to the confident mood on which it ended the previous week.

The weekly rise in M1, although the largest since May, was at the lower end of market expectations. Helped by a downward revision in the previous week's figures, it means that M1 is still $700m below the Fed's upper target for money supply growth. It can rise by another $1.5bn next week and still stay within the target range.

U.S. bond prices last week seemed mesmerised by short-term money supply fears and ignored a number of favourable developments which, in the words of Smith Barney's Frank Mastrapasqua, would normally have argued for "noticeably higher prices."

Most of the economic information coming out of Washington confirmed the easier pace of the economic recovery. Retail sales *fell by 1.4 per cent in August,* while industrial production during the same month grew at only half the rate of the previous month. *Factory capacity utilisation* grew by 0.6 per cent last month to 76.7 per cent, which was much more modest than the 1.7 per cent rise in July.

This week's $14.25 treasury refunding, consisting of $5.75bn of 4-year notes, $5bn of 7-year notes and $3.5bn of 20-year bonds, is lower than expected. Mr Donald Regan, the Treasury Secretary, has reduced estimates of the treasury's fourth quarter cash needs from $60-$65bn to $45-50bn.

Finally, the Federal Reserve appears to be offsetting the seasonal tightness in the money markets by actively supplying *funds, and whereas the last* treasury refinancing occurred at a time when the authorities were tightening monetary *policy, the latest funding occurs* at a time when the authorities are maintaining a stable policy and, some analysts believe, might soon be tempted to relax.

For these reasons several analysts believe that once the latest refunding is out of the way, there may be room for the credit markets to move ahead again.

Elsewhere in the credit markets activity was at a low ebb with little interest on the part of corporate treasurers in tapping the market. However, the Commonwealth of Australia did file a shelf registration covering $400m of bonds as part of *its long-term overseas* borrowing programme.

William Hall

Aga postpones issue after share market falls 5%

BY KEVIN DONE, NORDIC CORRESPONDENT IN STOCKHOLM

AGA OF SWEDEN, the world's fifth largest industrial gas company, is postponing a private share issue aimed at UK and U.S. investors because of growing uncertainty in the Swedish stock market.

Aga had planned to issue up to 780,000 shares to raise SKr 250m-SKr 270m ($31.7m-$34.3m) to support *its ambitious* international expansion.

For nearly three years the Stockholm Stock Exchange has out-performed nearly all its rivals around the world but in the past two weeks the market has become increasingly nervous.

Last Friday the All Share Index (Veckans Affarer) fell by 2.2 per cent and during last week around SKr 4bn ($500m) was wiped off the value of Swedish stocks, bringing the worth of the Stockholm market to SKr 238bn.

Over the past two weeks the index has fallen by 4.4 per cent. The decline has been 4.9 per cent since the all-time high on September 5.

Aga's move to postpone its share issue *reflects* both its concern that the issue price would have been unsatisfactory and that the *shares* would quickly have been sold back into the Swedish market, thus depressing its share price. The company believes that the "Swedish stock market is at the moment considered uncertain among international *investors."*

The stock exchange has been unsettled by recent suggestions that the government is planning to introduce a new tax on shares. It has also been disturbed by a number of recent scandels, which have resulted in several companies having their shares suspended.

At the same time Trygg Hansa, one of Sweden's leading insurance companies, announced last week that it had recently sold shares worth Skr 1bn, preferring to put the funds into short-term loans in order to give it higher liquidity.

Many leading Swedish companies are expected to report record profits this year, yet the general political atmosphere is becoming uneasy as the Social Democratic Government runs into increasing opposition to its plans to introduce wage earner *funds, a way of giving the trade* unions a greater say in corporate decision making.

The government is also *encountering stiff problems* over the financing of a programme of income tax reform agreed with the centre and *liberal parties in 1982.*

The blue collar trade unions are demanding that the agreement should be ripped up as the price for them moderating their demands in the coming wage round.

● OUTOKUMPU OY, the Finnish *state-owned* mining, refining, and engineering company, has opened a new mine in Canada as a joint venture with Granges AB of Sweden and Hudson Bay Mining and Smelting of Canada. The two Nordic companies together have just under a 30 per cent interest in the copper and zinc mine at Trout Lake. The remainder is owned by the Canadian company which will operate the mine and refine the ore, Lance Keyworth reports from Helsinki.

Decline in net profit at Pirelli

By Rupert Cornwell in Rome

PIRELLI SpA, the holding company for the Italian tyre and cable group, has not escaped the general difficulties affecting the sector, resulting in good measure from the lengthy stagnation of the international car market.

The company has reported a decline in net profit for the year to April 30 to L18.8bn ($11.8m), from L25.5bn in the previous financial year.

An exceptional two-month period embracing May and June, *yielded* a further profit of L2.3bn. The interim balance sheet was drawn up to allow Pirelli to shift its financial year to run to end-June. This will permit results of all subsidiaries to be reflected in its figures.

The dividend for the 14 months will be at an unchanged L90, the amount paid for the previous 12 months. Meanwhile a forthcoming shareholders meeting, set for October 24, will be *asked to approve* plans to increase the capital of Pirelli SpA by L86bn in several stages over the next three years.

Stanbic share deal allowed to go ahead

BY J. D F. JONES IN JOHANNESBURG

Standard Bank Investment Corporation (Stanbic) shares will be relisted on the Johannesburg Stock Exchange this morning after a two-day suspension following confirmation at the weekend that the banking group's recent transaction with the Liberty Life group's insurance operation did not transgress the Banks Act.

Mr Henri de Villiers, group managing director of Standard Bank, said that the reason for the suspension of the listing had fallen away as a result of a meeting with Mr Owen Horwood, the Minister of Finance, and Dr Robert Burton, the Registrar of Financial Institutions.

On August 27 it was announced *that Stanbic was to* acquire a further stake of 25 per cent of Liberty Controlling Corporation (LCC)—which controls Liberty Life, via Liberty Holdings—so as to take its stake in LCC to 50 per cent.

It is believed here that the objection to the deal (which has taken three weeks to emerge) relates to the fact that existing *draft legislation* to amend the *Insurance Act proposes* that no financial institution should hold more than 25 per cent of an insurance company. The Stanbic/Liberty *deal* was therefore seen as defying the spirit of this draft legislation, although Stanbic's actual stake in *Liberty Life itself* would only be 22 per cent.

Mr de Villiers said in his *statement* that it had now been established to the registrar's satisfaction that "the transaction does not transgress the Banks Act as the legislation now stands," and that the parties had acted *bona fide.*

Mr Horwood, in a statement to be issued today, confirms that the parties acted in good faith but adds that "doubt does exist as the *whether* the restructuring of shareholdings in various companies could in general give rise to situations where the *intention of the legislature* in regard to section 31A (2) of the Banks Act 1965 may be defeated. This problem is now being investigated thoroughly with a view to a possible early amendment to the legislation."

Rotation of duties at Bank of Montreal

● The BANK OF MONTREAL has reassigned **Mr Grant L. Reuber** from deputy chairman to president and **Mr William E. Bradford** from president to deputy chairman. **Mr William D. Mulholland**, chairman, described the moves as "essentially entailing a rotation of duties." The changes are from November 1. Mr Reuber will be responsible for the line banking groups. He will continue to be responsible for the treasury group. Mr Bradford will be responsible for operations and systems, and for corporate staff functions, such as human resources, administration, real estate, accounting and control.

● **Mr Omar A. Bajamal** has been promoted to deputy general manager for planning, business development and human resources at head office, Jeddah, of the NATIONAL COMMERCIAL BANK.

INTERNATIONAL APPOINTMENTS

● **Mr Anthony Archdeacon**, at present an assistant general manager at BARCLAYS BANK INTERNATIONAL, London, has been appointed an assistant general manager for Australasia based in Sydney.

● **Mr Patrick Catania** and **Mr Steven Nivens** have joined the CHICAGO BOARD OF TRADE in the newly-created posts of senior marketing manager, energy, and marketing manager, energy, respectively. Mr Catania is responsible for brokerage house outreach and Mr Nivens is responsible for the petroleum industry.

● **Mr Timothy M. Kelley**, a senior vice-president of CITIBANK, has been appointed senior officer for the Middle East and Africa. He was in charge of the bank's activities in sub-Saharan Africa, based in Nairobi. He now supervises Citibank's network of branches in more than 60 countries throughout the Middle East and Africa. **Mr David Ansell**, vice-president, has been appointed regional head for Citibank's activities in West Africa. He will be based in Abidjan, Ivory Coast, from October 15.

● C. E. Heath has purchased for a cash consideration of C$800,000 45 per cent of the ordinary shares of ERIC MOTZFELDT & CO., a Montreal-based insurance broking company. **Mr J. J. Burton** and **Mr P. F. Dawson** will join the board of Eric Motzfeldt & Co.

● EURO-CLEAR has appointed **Mr Gordon C. Wilson**, a vice-president of Morgan Guaranty Trust Company, as a unit head in its commercial division. He will liaise between Euro-Clear and North America, Germany, Austria and Switzerland, and will be based in Brussels. *Mr Wilson was in charge of Morgan* Guaranty's relationships with financial institutions in the banking division of Morgan's London office.

● **M Jean Claude Vandecauter** has been appointed managing partner of KFR BELGIUM, *Brussels-based* arm of the Knight Frank & Rutley Group.

● AUSTRALIAN CONSOLIDATED MINERALS, the West Australian gold explorer, has appointed **Mr E. R. Gorham**, former co-ordinator of resources development for west Australia, to the board. **Mr J. H. Hohnen** and **Mr R. C. Simpson**, both inaugural directors of the company, have resigned. **Mr J. P. Du Cane** has been appointed deputy chairman of the company and **Mr K. M. Phillips** has been appointed alternate director for Mr Du Cane and **Mr E. T. Wood.**

● The board of supervisors of *the DAR AL-MAAL AL-ISLAMI* TRUST has appointed **Dr Ahmad Sani El Darwish** chief executive. He was chief operating officer. *Dr El Darwish comes to DMI* from the World Bank, where he was director of the West Africa projects department.

● **Mr Alexander C. Stark, Jr.**, executive vice-president network operations for AT & T Communications (formerly AT & T Long Lines), has been appointed president of the telecommunications joint venture company being formed by AT & T International of the U.S. and N. V. Philips Gloeilampenfabrieken of The Netherlands. **Mr Karel Hubee**, senior managing director of Philips Telecommunications Systems, has been appointed executive vice-president. The joint venture will develop and market public switching and transmission products. It will be headquartered in The Netherlands and subsidiaries will be set up in several European countries.

● *CORROON & BLACK CORP.* New York, an international insurance brokerage firm, has promoted two senior executives in its international division. **Mr Howard C. Hupp** has been named senior vice-president of Corroon & Black International. Mr Hupp is an authority *in assembling* and managing sophisticated financial alternatives to traditional risk management methods. He joined Corroon & Black International as vice-president in February 1981. **Ms Wendy Thompson** has been named vice-president. *She joined Corroon &* Black in September 1981. Ms Thompson has special expertise in the areas of political risk insurance and export credit insurance. Corroon & Black International maintains a presence, through exclusives and other correspondents, in 61 countries. Nineteen of the correspondent locations are offices of J. H. Minet & Co., a subsidiary of Minet Holdings in which Corroon & Black has a 20 per cent equity interest.

● **Mr Luis Rodriguez** has joined NATIONAL BANK OF NORTH AMERICA's Edge Act Office, North America International Bank, as a vice-president. Mr Rodriguez will be operations manager. He was previously associated with Intercontinental Bank, Barnett Bank, Southeast Bank and Irving Trust Company. **Mr Leon F. Ciferni** has been elected a senior vice-president of National Bank of North America. He is resident counsel of NBNA's legal division.

● **Mr William L. Campbell**, executive vice-president, marketing, PHILIP MORRIS, U.S., and **Mr James A. Remington**, execu*tive vice-president,* operations, have been elected vice-presidents of Philip Morris Inc.

● **Mr Kenneth L. Tibbetts**, has been *appointed* director of administration for SANTA FE LAND IMPROVEMENT CO.

● COMMERCIAL UNION has *appointed* **Mr H. B. Gordon** as executive vice-president of the group's Canadian operating companies.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Amex O/S Fin. 10¼ 90	100	92¼	92¾	0	−0¼	11.93
Bk. of Amer. 8 88 XW	150	†85⅝	86⅛	0	+0⅛	12.23
Bk. of Tokyo Hd. 11 90	100	93¼	93¾	0	0	12.47
Brit. Col. Hyd. 10¼ 88	200	95½	96	+0⅛	−0¼	11.47
CCCE 11⅛ 97	100	91⅜	91⅞	0	−0¾	13.05
CIBC 11 90	75	90⅞	91⅞	+0¼	+0⅛	12.98
Citicorp O/S 10⅜ 90	100	91⅛	91⅝	−0⅛	−0⅛	12.29
Coca Cola Int. 9⅞ 92	100	92	92½	0	+0½	11.29
Cr. Suisse Bah. 10½ 90	150	94¼	94¾	0	+0⅜	11.72
Credit Suisse 10½ 89	100	96½	97	0	+1¼	11.23
Den Norsk Crd. 11¼ 93	50	91¾	92¼	0	−0¼	12.71
Du Pont 11¼ 95	150	97½	98	0	−0¼	11.59
ECSC 11⅞ 90	75	98½	99	+0⅛	+0⅛	12.14
EDC 10¼ 88	100	96⅛	96⅝	0	0	11.83
EDC 11¾ 87	100	99⅜	99⅞	0	+0⅛	11.85
EDF 11⅛ 93	100	90⅞	91⅜	−0¼	+0¼	12.75
EEC 10¾ 95	75	87⅝	88⅛	+0⅛	−0⅛	12.79
EEC 11 87	350	97½	98	0	0	11.73
EIB 10⅜ 93	200	91¼	91¾	+0⅛	+0⅛	12.27
EIB 11 91	125	93½	94	0	+0⅛	12.29
Electrolux 10½ 90	50	91	91½	0	0	12.47
Enserch Fin. 11⅛ 93	100	93⅜	93⅞	+0⅛	+0⅛	12.78
Fuji Int. Fin. 10⅞ 90	100	91½	92	0	+0¼	12.75
Gen. Elec. Credit 9¾ 91	100	90½	91	0	+0⅛	11.59
GMAC O/S Fin. 10½ 90	200	95¾	96¼	0	+0⅛	11.39
Honeywell Int. 10¾ 90	100	96⅝	97⅛	0	−0¼	11.42
Ind. Bk. Japan 10⅞ 88	100	95¾	96¼	+0¼	+0⅛	12.01
Japan Air Lines 10⅞ 98	42	90⅝	91⅛	0	+0⅛	12.22
Japan Air Lines 11 93	75	93⅞	94⅜	+0⅛	+0⅛	12.03
J. P. Mrgn. 11½ 90 XW	150	97⅝	98⅛	+0⅛	0	11.83
Levi Strauss Int. 11 90	75	95⅜	95⅞	0	+0⅛	11.96
LTCB 10⅛ 90	100	91¼	91¾	0	+0½	12.68
Merrill Lynch 10½ 90	200	94¼	94¾	+0⅛	+0¼	11.84
Midland Int. F. 11½ 92	150	95¾	96¼	0	+0⅛	12.25
Mitsubishi Cpn. 10½ 90	100	92⅜	92⅞	−0⅛	−0⅛	12.15
Mitsubishi Fin 11⅛ 90	100	93⅝	94⅛	+0⅛	−0½	12.75
Nippon Credit 11 90	100	92⅛	92⅝	−0⅛	+0⅛	12.73
Nippon Credit 11¼ 93	100	92⅜	92⅞	0	+0⅛	12.60
OKB 10 91	100	88⅞	89⅜	0	0	12.25
Ontario Hydro 10¼ 90	250	91⅞	92⅜	−0⅛	−0½	12.00
Ontario Hydro 11¼ 89	200	98⅛	98⅝	+0⅛	−0⅛	11.60
Ontario Hydro 12¾ 92	200	102¼	102¾	+0⅛	−0⅛	12.27
Prudential O/S 10⅝ 93	100	94½	95	+0⅛	+0⅛	11.53
Prudential O/S 12¾ 87	150	103⅜	103⅞	+0⅛	−0¼	11.57
Sasktchwn. Pr. 10⅝ 90	125	93⅝	94⅛	0	0	12.13
SNCF 11½ 93	100	94⅜	94⅞	+0⅛	−0¼	12.47
S. Cal. Edison 10½ 90	75	94½	95	0	+0½	11.65
Sumitomo Fin. 10⅞ 90	100	91⅜	91⅞	0	+0⅛	12.78
Swiss Bk. Cpn. 10¾ 90	125	95⅝	96⅛	+0⅛	+0½	11.14
Texaco Capital 9¾ 90	150	92½	93	+0⅛	0	11.36
UBS 10 88	100	95½	96	0	−0⅛	11.19
UBS 11 89	150	99¼	99¾	+0⅛	−0½	11.10
Westpac Int. Fin. 11 90	100	†91½	92	0	+1	12.88
World Bank 10⅜ 88	150	95½	96	0	+0¼	11.59
World Bank 10⅞ 93	100	93	93½	+0⅛	+0½	12.08
World Bank 11¼ 88	100	98	98½	+0⅛	+0⅛	11.72
World Bank 11½ 90	150	96⅞	97⅜	+0¼	+0⅛	12.12

Average price changes... On day 0 on week +0⅛

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Air Canada 7⅜ 93	100	97½	98¼	0	−0¼	7.69
ANAS 8⅛ 88	100	99	99½	0	−0½	8.43
Austria, Rep. 7¾ 89	100	98	98½	−0¼	−0⅛	8.00
Austria, Rep. 8 93	100	99½	100	−0¼	−0⅛	8.03
Avon Int. Fin. 7½ 93	100	97¼	97¾	0	−0¼	7.88
BFCE 8¼ 90	150	98⅝	99⅛	−0⅛	−0⅛	8.46
Comp. T. N. Esp. 8¼ 93	100	94½	95½	0	+0⅛	9.03
Deuts. Bk. 3¾ 91 WW	240	105	106¼	−0½	−1½	2.92
Deuts. Bank 3¾ 91 XW	240	80	80½	0	−0⅛	7.18
Dresdner Fin. 4 90 WW	250	108	109	−0⅛	−0⅛	2.61
Dresdner Fin. 4 90 XW	250	82⅞	83⅜	0	0	7.20
ECSC 8 90	160	99¼	99¾	−0⅛	−0⅛	8.09
EEC 8⅛ 93	250	99⅞	100⅜	0	−0¼	8.22
Eurofima 7½ 90	100	98	98½	0	+0⅛	7.83
Finland Rep. 7½ 88	150	98⅛	98⅞	+0⅛	−0½	7.88
Int.-Am Dv. Bk. 7¾ 93	200	94⅞	95⅜	0	0	8.50
Int. Standard Ele. 7¾ 93	100	98⅜	98⅞	0	0	7.95
Japan Devt. Bk. 7½ 90	100	98⅞	99⅜	0	0	7.66
Kobe City 7 93	120	94¾	95¼	−0⅛	−0¼	7.74
LTCB 8 90	100	99	99½	−0⅛	0	8.14
Renault Accptnce. 8 90	150	96⅞	97¼	0	−0⅛	8.59
SDF France 7⅞ 93	100	98⅛	98⅝	−0¼	−0¼	8.43
S. African Tran. 8¼ 90	100	98⅞	99⅜	−0¼	+0⅛	8.41
Volkswagen Int. 7½ 93	200	94⅞	95⅜	0	0	7.99
World Bank 7½ 90	250	96	96½	0	−0½	8.24
World Bank 7½ 93	300	94⅞	95⅜	+0¼	−0⅛	8.24

Average price changes... On day 0 on week −0¼

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Akzo 5⅝ 93	100	98¾	99	0	+0¼	5.78
Bank of Tokyo 6 91	100	101	101¼	−0¼	−1⅛	5.82
Bergen, City of 5¾ 95	40	99	99¼	+0⅛	0	5.85
Carls-Tuborg B. 5½ 93	80	101⅛	102	0	0	5.49
Chujitsuya Co. 5⅞ 93	50	97	97¼	+0⅛	−0⅛	6.28
Denmark 6¼ 91	100	102	102¼	0	+1¼	6.02
EDC 5¾ 91	100	98½	98¾	+0¼	+0⅛	5.60
EIB 5¾ 93	100	98	98½	−0⅞	−0⅞	5.99
Ex.-Im. Bk. Jap. 5⅝ 91	100	98	98¼	0	0	5.93
Ind. Fd. Finland 6¼ 91	40	100⅝	101	+0⅛	+0⅛	6.10
Int.-Am. Dv. Bk. 6⅛ 93	100	101⅜	102	−0¼	+0¼	5.86
Japan Dev. Bank 5½ 93	100	97½	98	+0¼	−0¼	5.81
Kansai Elec. Pwr 6 91	100	101½	101¾	0	+0¼	5.73
Kawasaki Steel 6⅛ 91	100	101⅛	101⅜	0	−0¼	5.92
Montreal Urban 5¾ 93	100	100⅜	100⅝	+0¼	+0¼	5.88
Mount Isa Fin. 6 93	100	102	102¼	−0½	−0¼	5.71
Nisshin Steel 6¼ 91	100	99⅜	99⅝	0	−0¼	6.33
Norsk Hydro 5½ 98	100	96	96⅜	−0⅞	−0⅞	5.89
Osterr. Draukraft 6 93	100	102	102¼	0	−0⅛	5.71
Osterr. Post 6⅛ 91	100	102⅜	102⅝	−0⅛	−0⅛	5.71
Quebec Hydro 5½ 93	100	100¼	100½	−0⅛	−0¼	5.44
Sekisui House 6 93	100	101	101¼	−0⅛	−0⅛	5.84
Sumitomo M. Ind. 6 91	100	101	101¼	+0½	−0¼	5.81
Tohoku El. Power 6 93	100	†100	100½	−0⅛	−0⅛	5.98
Trizec Corpn. 6¼ 91	100	101⅛	102	0	+0⅛	5.93
World Bank 5⅝ 93	100	97½	97¾	−0¼	+0½	5.95

Average price changes... On day −0⅛ on week −0⅛

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 8⅝ 92	15	103⅞	104⅛	0	0	7.97
EIB 8⅛ 92	15	101⅛	102⅛	0	0	7.91
Japan Airlines 7⅝ 87	9	†101⅛	102¼	0	−0¼	7.17
New Zealand 7⅝ 89	15	101⅛	102⅛	−0⅛	+0⅛	7.23
World Bank 8⅛ 92	20	102⅝	103⅛	0	−0⅛	7.86

Average price changes... On day 0 on week 0

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
British Col. 11⅛ 93 C$	25	†93⅞	94⅛	0	−0¼	12.81
Cn. Pc. Scs. 11⅞ 90 C$	75	†97⅝	98⅛	0	−0⅛	12.30
Chrb. France 11⅞ 95 C$	40	†93¼	93¾	0	−0¼	12.96
Norcen 12¾ 93 C$	60	†95	95½	0	0	13.64
TD Mt. Cpn. 12½ 88 C$	40	†99	99½	0	−0¼	12.71
Quebec Prov. 12 93 C$	50	†98⅛	98⅝	0	0	12.25
Xerox Canada 12 88 C$	40	†99⅛	100	+0⅛	+0⅛	12.06
Forsmarks 11½ 93 ECU	40	103	103½	0	+0⅛	11.01
Svenska 11¾ 91 ECU	40	99	99½	−0½	−0⅛	11.35
Consol. Foods 7⅝ 88 Fl	100	95⅛	95⅝	+0⅛	+0⅛	8.46
Elect. Supply 8⅝ 88 Fl	75	96⅛	96⅝	+0⅛	+0⅛	9.69
Nederland Gas 7⅝ 88 Fl	100	98⅛	99⅛	+0⅛	+0⅛	7.79
Philips Lamps 7⅝ 88 Fl	100	97½	98	0	+0⅛	7.84
PHP 8⅝ 88 Fl	50	99½	100	+0⅛	+0⅛	8.81
Sw. Ex. Cred. 7⅝ 88 Fl	100	95	95½	+0⅛	+0⅛	9.05
OKB 14 86 FFr	400	100⅞	101⅞	0	0	13.19
Solvay et C. 14¾ 86 FFr	200	101⅞	102⅞	−0⅛	+0⅛	13.45
BFCE 11½ 88 £	50	96⅞	97⅜	0	0	12.27
British Oxyg. 11¾ 91 £	50	100¼	101	+0⅛	+0½	[illegible]
CEPME 11½ 95	35	98¼	99	−0⅛	−0¼	11.46
EEC 11⅞ 91 £	50	100	100½	−0⅛	−0⅛	11.79
Fin. for Ind. 10½ 90 £	30	95	95½	−0⅛	−0⅛	11.53
Fin. for Ind. 12⅜ 88 £	30	103	103½	+0⅛	0	11.33
F. Mat. Oranji. 12⅜ 92 £	30	101⅛	102⅛	−0⅛	+0⅛	12.23
Gen. Elec. Co. 12½ 89 £	50	102⅛	103⅛	+0⅛	+0⅛	11.66
Mort. Bk. Fin. 11⅛ 89 £	15	96½	97½	0	+0⅛	12.54
Norsk Hydro 12 90 £	30	101⅞	102⅞	−0⅛	+0⅛	11.45
Quebec 14½ 89 £	30	108⅛	109⅛	0	−0½	12.29
SNCF 11½ 89 £	30	96⅛	97	−0⅛	−0⅛	12.30
Sweden 11⅝ 93 £	50	93⅛	94⅛	−0⅛	+0⅛	12.30
Sw. Ex. Cred. 11¼ 88 £	30	96⅛	97⅛	−0⅛	0	12.08
World Bank 11⅛ 88 £	100	97⅛	98	−0⅛	0	11.78
World Bank 11⅜ 91 £	75	99⅜	99⅞	−0⅛	−0⅛	11.76
Euratom 11 93 LuxFr	500	102⅛	103⅛	0	−0⅛	10.52
Europarat 10⅝ 93 LuxFr	600	102⅜	103⅜	−0⅛	+0⅛	10.24

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
BFCE 5⅛ 87	0¼	99½	99¾	27/1	10⅞	10.92
BFCE 5⅛ 88	0¼	99⅝	99⅞	20/1	10.18	10.23
Caisse Nat. Tele. 5⅛ 90	0¼	99¼	99⅝	21/10	9.56	9.63
CCF 5⅛ 95	0¼	99½	99⅞	7/10	10.19	10.28
CCF 5⅛ 98	0¼	99⅛	100	24/9	9.94	9.95
CEPME 5¼ 88 WW	0¼	99½	100	3/12	10.56	10.59
CEPME 5¼ 92	0¼	99⅜	99⅞	10/12	10½	10.54
Chemical NY 6¼ 94	‡0¼	100⅛	100½	23/9	10.82	10.75
CNCA 5¼ 95 XW	0¼	99⅛	99⅝	7/12	10	10.06
CNT 5⅛ 91	0¼	99⅛	99⅝	6/11	9⅛	9.32
Credit Agricole 5⅛ 97	0¼	99⅛	99½	24/9	10	10.06
Credit Lyonnais 5⅛ 94	0¼	99⅛	99½	5/1	10.31	10.39
Credit Lyonnais 5¼ 97	0¼	99⅛	99½	1/10	10.06	[illegible]
Credit Nat. 5⅛ 94	0¼	99	99½	9/4	10⅛	[illegible]
EDF 5¼ 95 XW	0¼	99⅛	99½	10/2	11⅛	11.40
EEC 5 90	0¼	99⅞	100⅛	5/1	10.19	10.19
Kansallis Osake 5½ 92	0¼	100⅛	100½	6/11	9⅛	9.09
Long Term Credit 5¼ 92	0¼	100	100½	27/11	9¾	9.74
J. P. Morgan 5¼ 97	§0¼	100⅛	101	12/11	10.81	10.72
New Zealand 5¼ 87	0¼	100⅛	100⅜	7/10	10.06	10.03
NZ Steel Dev. 6¼ 92	0¼	100	100½	22/12	10¼	10.22
Nippon Credit 5¼ 90	0¼	100⅛	100⅜	10/2	11⅛	11.18
Societe Gen. 5¼ 90 XW	0¼	99	99⅛	9/11	9⅛	9.21
Societe Generale 5¼ 95	0¼	99⅜	99⅝	1/3	10.31	10.38
Sweden 5¼ 89	0¼	100	100⅛	26/2	10.19	10.18
Sweden 5¼ 93	0¼	100⅛	100⅜	3/2	11.18	11.15

Average price changes... On day 0 on week +0⅛

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
Bridgestone Tire 5½ 96	3/82	470	102	103½	−1½	0.44
Canon 7 97	7/82	748.2	224	226	−2¼	15.17
Daiwa Sec. Co. 5½ 96	10/83	508	96⅛	97⅛	−0⅛	1.59
Hitachi Cable 5¼ 96	2/82	515	107	108½	−1½	8.06
Honda Motor 5¼ 98	6/83	884	97⅛	98⅛	0	2.68
Honda Motor 5½ 97	3/82	759.8	113¾	114¾	0	1.88
Kumagai Gumi 6¼ 97	10/82	400	118⅛	120	−0⅞	−0.33
Kyowa Hakko 8⅛ 97	2/83	762	114⅛	115⅛	−1⅜	10.52
Minebea Co. 6½ 98	5/83	667	124⅛	125⅛	−2⅛	−1.82
Mitsubishi Elec. 5¾ 98	6/83	396	108⅛	109⅛	−0⅛	6.54
Nippon Electric 5½ 97	2/82	765.0	179½	181½	−2⅛	4.20
Nippon Oil Co. 5¾ 98	4/83	964	109	110	+0⅛	11.67
Nissan Motor 5⅛ 98	4/83	770	88⅛	89⅛	−1⅛	−2.30
Olympus Optic. 6¼ 97	12/82	1331	101⅛	103⅛	−0⅛	10.35
Orient Finance 5⅛ 97	3/82	927.2	87⅛	89⅛	−1⅛	10.95
Orient Leasing 5⅛ 98	6/83	2680	93⅛	95⅛	−0⅛	−4.36
Secom 8 88	11/83	2920	114⅛	116	−2⅛	3.23
Sumitomo Elec. 5½ 97	3/82	577.3	109⅛	111⅛	−2	3.48
Sumitomo Met. 5⅛ 96	10/81	296.1	70	71½	−0⅛	33.28
Yamaichi Sec. Co. 5 98	8/83	472	93⅛	94⅛	−0⅛	−0.63
NEC Cpn. 3½ 93 SwFr	6/83	978	145	147	−3⅛	−3.47
Sanyo Elec 3½ 93 SwFr	5/83	507	104	106	−1½	13.75
Konishiroku 6¼ 88 DM	6/82	616	118⅛	119⅛	+0⅛	2.17
Mitsubishi H. 6 89 DM	2/82	263	110⅛	111⅛	−0⅛	5.36
Sum Realty 6¼ 92 DM	2/83	366	116⅛	117⅛	−1½	−3.88

EUROBOND TURNOVER

(nominal value in $m)

	Cedel	Euro-clear
U.S. $ bonds		
Last week	5,124.8	9,953.0
Previous week	5,911.1	7,491.4
Other bonds		
Last week	1,238.5	979.5
Previous week	1,053.9	495.6

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn = The current coupon. C.yld = The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg.day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Kredietbank NV; Credit Commercial de France; Credit Lyonnais; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bank of Tokyo International; Chase Manhattan; Citicorp International Bank; Credit Commercial de France (Securities) London; Daiwa Europe NV; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Merrill Lynch; Morgan Stanley International; Nomura International; Orion Royal Bank; Robert Fleming and Co.; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strauss Turnbull; Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on September 16

UK COMPANY NEWS

Mainmet placing to raise £378,000—joining USM

LONDON STOCKBROKERS Schaverien have placed a quarter of the equity of Mainmet Holdings raising £378,000 prior to the company joining the unlisted securities market. The issue involved 600,000 shares at 63p each.

West Yorkshire based Mainmet is involved in the maintenance and metering of energy systems and supplies. All the money being raised, some £300,000 after expenses, is for the benefit of the company.

The company's mainstream business is tied to the metering of community or district heating schemes. The directors estimate that there are around 3,000 such schemes in the UK servicing about 300,000 dwellings. About 10 per cent of those homes are installed with a heat meter which enables the occupants to be charged according to the amount of heat consumed. The balance is charged on a flat rate basis.

The directors say there have been significant developments in community heating schemes in recent years and they see an increasing demand for sophisticated measuring equipment. The Council of the EEC has recommended the use of meters in all community heating schemes and both West Germany and France have legislation in place for meters on new schemes. The directors think it likely that the UK will follow suit.

This mainstream operation, Mainmet, accounts for 98.6 per cent of group turnover. Most of the customers are local authorities and housing associations. Four customers account for three quarters of its turnover excluding meter sales and one customer accounts for 86 per cent of Mainmet's meter sales.

There are two other subsidiaries. PEC was formed this year as a joint venture with Hawker Siddeley Revenue Controls to develop a prepayment heat controller. The other is Savaflush, incorporated in 1981, marketing a system which conserves the flow of water in toilets.

Profits have grown from £59,209 in the year to May 1981, to £87,896 to May 1983. The latest figure is struck after a maiden loss of £18,251 from Savaflush. Shareholders' funds at the end of May were £231,424 including goodwill of £69,908.

The directors are confident of the expansion and development of the business from both its traditional activities and the exploitation of products in the areas of energy and water conservation.

It is their intention to pay a dividend for the year to May 1984 if there is a profits increase.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims: Beatson Clark, Bifurcated Engineering, Bodycote International, Fisons, G. F. Lovell, Pittard, Ransomes Sims and Jefferies, Renown Incorporated, Tarmac.

Finals: Blue Bird Confectionery, A. J. Worthington.

FUTURE DATES

Interims—

Astbury and Madeley	Sept 22
Barker and Dobson	Sept 23
Beauford	Sept 29
Bentalls	Sept 29
Combined English Stores	Sept 27
Metalrax	Sept 26
Riley Leisure	Sept 28
Spear and Jackson	Oct 6
Stylo	Sept 30
TR Natural Resources Inv. Tst.	Oct 26
Wiljay	Sept 26
Wilkes (James)	Sept 27
Wills (Geo.)	Sept 22

Finals—

Lawrie Plantations	Sept 28
Mitchell Cotts	Oct 6
Park Place Investments	Sept 22
Ramar Textiles	Sept 27
Regentcrest	Sept 22
Westminster & Country Props.	Sept 23

ROYAL DUTCH PETROLEUM COMPANY

(N. V. Koninklijke Nederlandsche Petroleum Maatschappij)

Established at The Hague, The Netherlands

INTERIM DIVIDEND 1983

The Supervisory Board and the Board of Management of the Company have declared on account of the year 1983 an interim dividend amounting to Netherlands Guilders 3.45 per share on its outstanding shares of 10 guilders par value.

In the case of holders of bearer certificates with coupons this interim dividend will be payable against surrender of coupon No. 174 on or after 27th September 1983, at the offices of N. M. Rothschild & Sons Limited, New Court, St. Swithin's Lane, London EC4P 4DU on business days between the hours of 9.30 a.m. and 2 p.m.

Payment will be made in sterling at the buying rate of exchange current in Amsterdam at 2 p.m. on 20th September 1983 in the case of coupons presented on or before that date, or on the day of presentation in the case of coupons presented subsequently. Coupons must be accompanied by a presentation form, copies of which can be obtained from N. M. Rothschild & Sons Limited, and the face of each coupon must bear the stamp or other indication showing the name of the presenter.

Coupons must be left for an appropriate period for examination.

Shareholders may request payment of the dividend in a different currency. Information in this respect will be supplied by the paying agent upon request.

Netherlands dividend tax at the reduced rate of 15 per cent will be deducted from the gross dividend where:

(a) United Kingdom income tax has also been deducted;

(b) Coupons are presented on behalf of residents of the United States of America, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Ireland, Japan, Luxembourg, Netherlands Antilles, New Zealand, Norway, South Africa, Spain, Sweden or West Germany, provided they lodge the appropriate declaration form.

Netherlands dividend tax at the reduced rate of 20 per cent will be deducted from the gross dividend where coupons are presented on behalf of residents of Indonesia or Surinam, provided they lodge the appropriate declaration form.

In all other cases Netherlands dividend tax of 25 per cent is to be deducted.

In the case of shares, whose dividend sheets were, at the close of business on 16th September 1983, in custody of a Depositary admitted by Centrum voor Fondsenadministratie B.V., Amsterdam, this interim dividend will be paid to such Depositary on 27th September 1983. Such payment will be made through the medium of N. M. Rothschild & Sons Limited, after receipt by them of a duly completed CF Dividend Claim Form.

Where appropriate, the usual affidavit certifying non-residence in the United Kingdom will also be required if payment is to be made without deduction of United Kingdom income tax.

Where under the double tax agreement between the United Kingdom and the Netherlands, 15 per cent Netherlands dividend tax has been withheld, the 15 per cent Netherlands tax is allowable for a resident of the United Kingdom as a credit against the United Kingdom income tax payable in respect of the dividend. The deduction of United Kingdom income tax at the reduced rate of 15 per cent instead of at the Basic Rate of 30 per cent represents a provisional allowance of credit at the rate of 15 per cent.

19th September 1983 ROYAL DUTCH PETROLEUM COMPANY

Horace Cory

For the first six months of 1983 pre-tax profits of Horace Cory, chemical colour manufacturer, fell from £203,000 to £128,000.

Turnover was down at £1.6m against £1.62m and trading profits emerged £78,000 lower at £109,000.

Interest receivable added £19,000 (£16,000).

Net profits were £81,000 (£109,000), after tax of £47,000 (£94,000) giving earnings of 0.86p (1.16p). The interim dividend is held at 0.6p.

Last year pre-tax profits totalled £367,697, with £164,697 made in the second half, and a final of 0.8p was paid.

After interim dividend payments the retained surplus was down at £24,000 against £52,000

Platignum

The board of Platignum, manufacturers of writing instruments and plastic mouldings, says the half-year payment of the dividend on preference shares due on November 1 1983 will not be paid.

The position concerning the payment of preference dividends due will be reviewed again after the end of the company's financial year.

Arndale repayment

Arndale Property Trust proposes to repay its £117,790 7½ per cent unsecured loan stock 1994/99 at £88 per cent. A meeting of stockholders is called for October 14.

FT Share Information

The following securities have been added to the share Information Service:

Australis Mining NL (Section: Mines—Australian).

Dollonds Photographic Holdings (Industrials).

Epicure up to £1.15m —25% scrip

Despite a modest fall of £16,000 to £450,000 in the second half, pre-tax profits at Epicure Holdings rose from £1.01m to £1.15m in the full year to June 30 1983. The company—its principal activities are construction industry services and hotels—proposes a one-for-four scrip issue. The final dividend is raised from 1.125p to 1.35p for a total up from 2.005p to 2.13p net.

Group turnover improved from £12.55m to £15.86m. Tax for the year was higher at £353,000 compared with £288,000. Stated earnings per 5p share were up from 3.48p to 3.98p.

Compco Holdings

Full-year taxable profits of Compco Holdings, property investment and development concern, fell from a restated £486,000 to £292,000.

The dividend, however, for the 12 months to March 25 1983 is lifted 0.6p to 3.6p net per 20p share.

Net property income totalled £579,000 against £447,000, but associated companies profits fell £10,000 to £241,000. Interest received was £5,000 lower at £22,000.

There was a provision of £150,000 this time to reduce estimated realisable value advances regarding overseas properties, and there was also a £6,000 loss on mortgage redemption policies.

Tax absorbed £181,000 (£243,000) giving earnings of 6.39p against 11.87p.

Executex Clothes

The rationalisation and restructuring programmes undertaken by Executex Clothes, coupled with a new marketing policy, are now firmly showing their desired results, say the directors in their interim statement.

Turnover for the period to June 30 1983 increased by 24 per cent to £2m against £1.61m, and taxable profits rose from £79,100 to £152,000.

At the trading level profits were ahead nearly 28 per cent to £352,100 compared with £274,500. The pre-tax result was after depreciation £83,500 (£75,700) and interest £116,600 (£119,700).

The directors of this clothing manufacturer are reasonably confident that if present trends continue the company should, by the end of the year, be in a position to resume payment of a dividend. The last dividend was a 1.1213p final for 1980.

With the absence again of a tax charge earnings per 20p share moved ahead from 3.71p to 7.13p. The attributable surplus emerged at £106,800 (£1,900) after extraordinary debits of £45,200 (£77,200).

Thomas Walker

With second half taxable profits moving up from £32,438 to £83,350 full year results to June 30 1983 of Thomas Walker emerged more than trebled at £135,163 against £42,854.

The final dividend of this manufacturer of metal smallwares for the clothing industry is lifted from 0.542p to 0.6p for a higher total of 0.7675p (0.7095p) net.

Earnings per 5p share were down at 2.31p, compared with 3.75p, after a lower tax credit this time of £3,393, against £182,143, giving an attributable surplus of £138,556 (£224,997).

BIDS AND DEALS

West Group buys Moxham

West Group International has acquired A. R. Moxham (Crowthorne) from Humphreys and Glasgow. Moxham is a civil engineering contractor with a workforce of approximately 200 which specialises in the laying of gas and water pipes.

Moxham's turnover and profit before tax for the year ended March 31, 1983 amounted to £4.71m and £449,000 respectively. Net tangible assets as at that date amounted to £382,000.

The consideration paid for Moxham was £505,000 in cash and, in addition, a dividend of £132,000 was paid by Moxham out of reserves to H and G prior to completion of the acquisition.

All profits earned by Moxham since March 31, 1983 will accrue to West's Group, but such profits up to the date of completion will be treated as reducing the element of goodwill in the purchase consideration.

CHARTERHOUSE GROUP EXPANDS IN U.S.

A subsidiary of Charterhouse Group has acquired Fendt Finding Company from Carlson Cos. Inc. of Minneapolis. The group includes members of Fendt's senior management. Terms of the transaction have not been disclosed.

Fendt Finding Company located in Hatfield PA, is a producer of die-struck jewellery findings which include parts for ear-rings and pendants, finished rings and wedding bands. Sales for 1983 are expected to be $27m.

AVANA BUYS

The Avana Group has purchased the South Wales division of O.P. Chocolate, a subsidiary of Nabisco Brands. The division produces chocolate wafer biscuits and novelties. Its main plant is in Dowlais and it also operates from Abergavenny.

Avana has paid cash, but the consideration represents less than 5 per cent of its net tangible assets.

Nabisco is confident that the change in ownership will be in the best long-term interests of the division. Avana confirms that attention will be given to all aspects of the operation and is confident that necessary improvements can be achieved.

SHARES STAKES

1928 Investments Trust—London and Manchester Assurance Company has bought 100,000 ordinary, which brings its total holdings to 9,514,999.

Anvil Petroleum—Finance and Investment International purchased 42,000 shares, increasing its holding to 2,132,316 shares.

LADBROKE INDEX
693-700 (−2)
based on FT Index
Tel: 01-493 5261

East Daggafontein Mines, Limited

Interim report

June 30, 1983

	Six months ended June 30 1983 R'000	Six months ended June 30 1982 R'000	Year ended December 31 1982 R'000
Revenue			
Royalties	1 048	87	561
Interest received and sundry revenue	133	8	27
	1 181	95	588
Expenditure	269	296	330
Income (loss) before taxation	912	(201)	258
Taxation – estimated	513	–	118
Income (loss) after taxation	399	(201)	140

Results for the half year

Income from the tributing agreements with Grootvlei Proprietary Mines Limited and Marievale Consolidated Mines Limited were considerably higher than for the corresponding period in 1982. Indications are that the higher level of income may not be maintained during the second half of 1983 and the results for the six months ended June 30, 1983 should not be considered as approximating one half of the results for the year ending December 31, 1983.

In view of the anticipated capital expenditure referred to below, the directors consider it prudent to preserve the company's cash reserves and therefore do not recommend any dividend at this stage.

East Rand Gold and Uranium Company Limited (Ergo)

On July 1, 1983 the company and Ergo made a joint announcement concerning a preliminary agreement they had entered into in respect of a project to treat 415 million tons of gold bearing slimes reserves situated on the East and Far East Rand. The initial capital outlay was estimated at R83 million and the after-tax cost estimated at approximately R28 million, to be funded equally by this company and Ergo. East Daggafontein Mines, Limited will receive one-half of the benefit arising from the project. Negotiations are still proceeding satisfactorily and further announcements regarding financing arrangements will be made by both companies in due course.

On behalf of the board

A. H. Lundin—*Chairman*
C. L. von Christierson—*Director*

19 Girton Road
Parktown, 2193
Johannesburg

September 19, 1983

APPOINTMENTS

Lord Croham to be chairman of Guinness Peat Group

GUINNESS PEAT GROUP has appointed Lord Croham as non-executive chairman from October 1. As originally planned Mr Alastair Morton, chief executive since January 1982, is relinquishing the additional role of chairman following the group's reorganisation. Lord Croham, who is also chairman of the British National Oil Corporation and a director of Pilkington Bros, joined the Guinness Peat Board as a non-executive director in April.

*

DIRECTORS & OFFICERS, a member of The Legal Protection Group, has appointed Mr E. C. Barnes as insurance manager. He joined the group from Sedgwick. His particular interest will be warranty and indemnity insurance.

*

H G SERVICES, St Albans, has made two appointments. Mr Cary Game has been promoted from marketing manager to marketing director; and Mr Philip J. Bradley has been appointed financial director.

*

PA MANAGEMENT CONSULTANTS is establishing a computer aided engineering unit as part of an investment in computer integrated manufacturing. It is to be headed by Dr Norman Schofield, who joins PA after four years with Compeda (part of Prime Computers Inc) as group technical director.

*

Mr Norman Hart, managing director of HART FENTON & CO., a subsidiary of Sea Containers Group, is taking early retirement to return to general marine consultancy. He will be succeeded by Mr John Pawsey as managing director and Mr Bob Selby will become deputy managing director.

*

Mr David Montagu, chairman of J. Rothschild Investment Management, has joined the London committee of the OTTOMAN BANK.

*

The "SHELL" TRANSPORT AND TRADING CO. has appointed Mr D. W. Chesterman as company secretary from October 1, on the resignation of Mr G. J. Okell. Mr Chesterman is a barrister and a senior legal adviser in the legal division of Shell International Petroleum.

*

Mr Barrie Sales, director of news and current affairs at THAMES TELEVISION, has been appointed deputy to the director of programmes and been made an executive director of the company from October 1.

*

Mr Ian Foster has been appointed chairman of a new shipbroking company, E. D. & F. MAN (Shipping). Until recently a managing director of Galbraith Wrightson, he joins the group today. The Man group has decided to expand its shipping activities from its existing shipowning and sugar freight chartering base, which presently trades on the Baltic Exchange as Femis, and which will continue to trade under that name. The present chairman of Femis, Mr Jonathan Boyle, will act as managing director of the new company.

*

Mr E. J. Hewitt and Mr P. W. Stone have been appointed executive directors of EDWARD MANSON & CO. LTD., principal banking subsidiary of Manson Finance Trust. Mr Hewitt, who was joint general manager and director of the Co-operative Bank is to be finance director, while Mr Stone, who is joining from First National Finance Corp where he was an associate director, will be responsible for lending operations.

*

Mr Graham Hadley has been appointed secretary to the CENTRAL ELECTRICITY GENERATING BOARD in succession to Mr John Anderson who has become deputy chairman of the Southern Electricity Board. Mr Hadley will take up his appointment on October 3 for three years on secondment from the Civil Service. He is currently under secretary at the Department of Energy where he is head of the electricity division.

*

Mr Juri Sikorski has been appointed director of marketing for BOOTS-CELLTECH DIAGNOSTICS. This is a new joint venture company formed by The Boots Company and Celltech, to develop and market diagnostic and health care products, based on monoclonal antibodies. Mr Sikorski joins from Servier Laboratories where he was divisional marketing manager for biological products.

*

LIN PAC PLASTICS has appointed Mr A. J. D. Heap as managing director. He succeeds Mr Michael Cornish, who has finished his secondment to the company, and who will move on to another appointment within the Lin Pac Group. Mr Heap was Lin Pac Plastics' sales director.

*

W. H. SHAW & SON confirm the appointment of Mr Ken Rayfield as managing director, in succession to Mr Wilf Beck who will be retiring in October. Mr Rayfield was a director with Unit Pallets, Warrington.

*

Mr William D. H. Gregson, director, Feranti Holdings, has been elected 1983-84 president of BEAMA, the federation of British Electrotechnical and Allied Manufacturers' Associations. He is also deputy chairman of the British Airports Authority. He succeeds Mr Tim Sallitt, a director of Hawker Siddeley Group. Mr C. R. Thompson, a director of NEI and chairman, NEI International, was elected deputy president.

*

Mr Gordon Griffiths has been appointed to the board of IMMEDIATE BUSINESS SYSTEMS as executive vice-chairman. He is a non-executive director of Myson Group.

BASE LENDING RATES

A.B.N. Bank	9½%	■ Hambros Bank	9½%
Al Baraka International	9½%	Heritable & Gen. Trust	9½%
Allied Irish Bank	9½%	■ Hill Samuel	§ 9½%
Amro Bank	9½%	C. Hoare & Co.	† 9½%
Henry Ansbacher	9½%	Hongkong & Shanghai	9½%
Arbuthnot Latham	9½%	Kingsnorth Trust Ltd.	11 %
Armco Trust Ltd.	9½%	Knowsley & Co. Ltd.	10 %
Associates Cap. Corp.	9½%	Lloyds Bank	9½%
Banco de Bilbao	9½%	Mallinhall Limited	9½%
Bank Hapoalim BM	9½%	Edward Manson & Co.	10½%
BCCI	9½%	Midland Bank	9½%
Bank of Ireland	9½%	■ Morgan Grenfell	9½%
Bank Leumi (UK) plc	9½%	National Bk. of Kuwait	9½%
Bank of Cyprus	9½%	National Girobank	9½%
Bank of Scotland	Ω 9½%	National Westminster	9½%
Banque Belge Ltd.	9½%	Norwich Gen. Tst.	9½%
Banque du Rhone	10½%	P. S. Refson & Co.	9½%
Barclays Bank	9½%	Roxburghe Guarantee	10 %
Beneficial Trust Ltd.	10½%	Royal Trust Co. Canada	9½%
Bremar Holdings Ltd.	9½%	Standard Chartered	‖ 9½%
Brit. Bank of Mid. East	9½%	Trade Dev. Bank	9½%
■ Brown Shipley	10 %	TCB	9½%
CL Bank Nederland	9½%	Trustee Savings Bank	9½%
Canada Perm't Trust	10½%	United Bank of Kuwait	9½%
Castle Court Trust Ltd.	10 %	United Mizrahi Bank	9½%
Cayzer Ltd.	9½%	Volkskas Intnl. Ltd.	9½%
Cedar Holdings	10 %	Westpac Banking Corp.	9½%
■ Charterhouse Japhet	9½%	Whiteaway Laidlaw	10 %
Choulartons	10½%	Williams & Glyn's	9½%
Citibank Savings	¶10½%	Wintrust Secs. Ltd.	9½%
Clydesdale Bank	9½%	Yorkshire Bank	9½%
C. E. Coates	10 %		
Comm. Bk. of N. East	9½%		
Consolidated Credits	9½%		
Co-operative Bank	* 9½%		
The Cyprus Popular Bk.	9½%		
Duncan Lawrie	9½%		
E. T. Trust	10 %		
Exeter Trust Ltd.	10½%		
First Nat. Fin. Corp.	11½%		
First Nat. Secs. Ltd.	11½%		
Robert Fraser	10 %		
Grindlays Bank	‡ 9½%		
■ Guinness Mahon	9½%		

■ Members of the Accepting Houses Committee.
* 7-day deposits 6%, 1-month 6.25%. Short-term £8,000/12-months 8.6%.
† 7-day deposits on sums of: under £10,000 6%, £10,000 up to £50,000 7%, £50,000 and over 8%.
‡ Call deposits £1,000 and over 6%.
‖ 21-day deposits over £7,000 7%.
§ Demand deposits 6%.
¶ Mortgage base rate.
Ω Money Market Cheque Account—9.15%. Effective annual rate—9.54%.

US $40,000,000

INDUSTRIAS RESISTOL, S.A.

(Incorporated in the United Mexican States)

Floating Rate Notes Due 1988

In accordance with the provisions of the Fiscal Agency Agreement between Industrias Resistol, S.A. and Continental Illinois National Bank and Trust Company of Chicago, dated as of 8th September 1981, notice is hereby given that the Rate of Interest for the next six month Interest Period has been fixed at 11¼% p.a. and that the interest payable on the relevant Interest Payment Date, 19th March 1984, against Coupon No. 5 in respect of US $50,000 nominal amount of the Notes will be US $2,812.15 and in respect of US $5,000 nominal amount of the Notes will be US $281.22.

Agent Bank
Continental Illinois Limited

19th September, 1983

RECENT ISSUES

EQUITIES

Issue price	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −	Net Div.	Times Covered	Gross Yield	P.E. Ratio
$115	F.P.	14.9	152	130	✠Aaronite Group	140		bd2.5	2.2	2.6	25.5
¶¶	F.P.	—	160	118	Assoc. Telecom	124	+4	b2.0	3.1	2.3	19.8
	F.P.	—	170	170	✠Cent'l IndTVN V50p	170		—	—	—	—
*200	F.P.	26.8	250	200	DPCE Hldgs 5p	235		b2.0	3.6	1.2	30.8
$100	F.P.	5.8	120	110	✠Gee (C.) 10p	119		u2.1	3.5	3.5	27.6
*190	F.P.	12.8	204	180	Gent (S.R.) 10p	184		b3.0	3.1	2.3	15.5
200	F.P.	—	218	205	Goring Kerr 10p	215		b5.0	2.1	20.5	3.3
375	F.P.	5.8	372	325	Henderson Admin	325	−5	u6.0	2.9	2.6	18.5
*125	F.P.	23.9	166	154	Int. Signal & Control A	160		uQ2c	4.0	0.8	29.7
¶¶	F.P.	—	72	56	Ivory & Sime 0.1p	60	−4	u0.25	11.8	0.6	20.3
=	F.P.	5.9	31	25	✠Metal Sciences 2½p	29		—	—	—	—
95	F.P.	12.8	94	88	Park Food 10p	88		u5.0	2.0	4.8	14.9
$210	F.P.	9.9	214	195	Peel Hldgs	196		bd7.35	1.2	5.3	20.6
¶¶	F.P.	—	34	32	P'sonal AssetsTst 12½p	33		—	—	—	—
$111	F.P.	26.8	254	165	✠P'lyt'chnicM'rine5p	245		ud2.0	1.9	1.2	—
$25	F.P.	9.9	31	26	✠Promotions H'se 5p	29	−1	b0.7	1.0	3.5	20.7
$148	F.P.	2.9	190	168	✠Real Time C'trol 5p	190	+10	u2.0	3.0	1.5	32.0
85	F.P.	16.9	120	97	✠SCUSA Inc. $0.01	100	−5	b0.015c	3.4	1.0	22.7
100	F.P.	2.9	85	78	✠Tech. for Bus. 10p	80		b4.2	6.0	7.5	[illegible]
83	F.P.	15.9	90	85	✠Thermal Scientific	88		b2.5	2.8	3.7	[illegible]
¶	F.P.	23.9	19	16	Yorks&Lancs Inv. W'ts	18		—	—	—	—

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −
92.96	£25	29/11	26¼	22	Allied-Lyons 11¾% Deb 2009	26¼	+½
¶¶	F.P.	—	129	107	Atlantic Met'n (UK) 12% UL 91-97	107	
—	£20	26/10	23¾	18	Bristol 11½% Red. 2008	21¼	
96.95	£25	21/10	26¼	22½	C.C.C. Economic 12¼% Gtd. Ln. 2013	26¼	+¾
99.75	£30	—	34¼	30¼	Cigna Overseas Finance 15% Ln. 2008	34¼	−¼
£100	£10	27/10	11¼	11	E'bourne W'rworks12½%R.Deb.2004	11¼	+¼
100p	F.P.	9/9	103p	101p	✠FKI 7% Red Cnv Pref	101p	
‖	F.P.	21/10	103¼	100¾	Fleming Am. Inv Tst 7% Cnv Uns Ln 99	100	−1
**	F.P.	30/9	103p	101p	Fuller, Smith & Turner 8% 2nd Cm. Prf	103p	
§100p	25p	9/12	33p	25p	LASMO 9½% Cum Red Pref	32½p	
—	—	—	100¾	100¼	Nationwide 11¼% Bds 20/8/84	100¾	+⅛
100	—	—	100⅛	99⅞	Do 11½% Bds 3/9/84	100⅛	+⅛
—	F.P.	—	109p	106p	Oceonics 10¾% Cum. Red. Pref. 1995	109p	
$100	F.P.	—	98	92	Oldham 11¼% Red 2010	97¼	+¼
£100	F.P.	—	102p	102p	Rockware 7.7% Cum. Cnv. 2nd Pref.	102p	
98.579	£25	31/8	98	93½	Trafford Park Est. 11¼% 2007/11	95½xd	+½
97.941	£25	14/10	26¼	23¼	Transport Dev 12¼% Uns Ln 2008	26¼	+½
99.898	£25	20/9	29⅝	24½	Watn'yM'nn&Trum'n12¼% Red.Deb.2008	28½	+½
103.5	—	—	102p	99½p	Weir 10% Red Cum Pref	101p	
99.124	£25	25/10	27¼	23¾	Westland 12¾% Deb 2008	27¼	+½
¶¶	F.P.	23/9	105	100	Yorks & Lancs Inv 13¼% Deb 2003	105	

"RIGHTS" OFFERS

Issue price	Amount paid up	Latest Renunc. date ●	Latest Renunc. date ■	1983 High	1983 Low	Stock	Closing price	+ or −
92	Nil	—	—	13pm	12½pm	Anglo-Indonesian	13pm	+½
80	Nil	—	—	10pm	9pm	Assoc. Paper	9pm	
1250cts	Nil	—	—	68pm	42pm	Barlow Rand 10cts	65pm	+8
‖	Nil	—	19/10	4½pm	2¾pm	Bridgend Proc. "A" Ord. 1p	3pm	
48	F.P.	—	28/10	48½	47	Cambrian & Gen. Sec.	47	
65	F.P.	—	28/10	68	64	" " Cap. 7½p	64	
48	F.P.	—	30/9	56	50½	Chamberlain Phipps 10p	54	
20cts	Nil	—	—	3pm	1½pm	Eagle Corp'n. 10cts.	1½pm	
440	Nil	—	—	82pm	72pm	Exco Int'l. 10p	72pm	−8
34	Nil	—	16/9	38	33	✠First Talisman Inv. 20p	34	
82	F.P.	—	28/10	89	80	✠Floyd Oil 10p	80	
40	Nil	—	14/10	61	51	Group Lotus Car 10p	57	−2
17	Nil	—	—	3pm	2pm	Helene of London 10p	3pm	+1
R3.80	Nil	—	23/10	15pm	5pm	Imperial Cold Storage 25c	6pm	−1
50	Nil	—	—	38pm	22pm	‡‡Marinex Pet. 10p	24pm	+1
350	F.P.	—	28/9	455	425	Midland Bank £1	423	−5
A$2	Nil	—	—	70pm	65pm	Nat. Com. Bk Aust. $A1	65pm	−5
80	F.P.	—	21/10	87	81½	Nesco Invs.	87	+2
20p	F.P.	15/9	21/10	27	24	Parkdale 10p	26	+1
120	Nil	—	—	9pm	3pm	Pritchard Servs	3pm	−1
10	F.P.	—	30/9	13	11¼	✠Sheraton Secs. 10p	13	
95	F.P.	—	14/10	143	126	Steinberg 10p	139	−1
310	Nil	—	25/10	58pm	42pm	Tate & Lyle £1	42pm	
175	F.P.	—	30/9	240	203	Unitech 10p	203	−7
180	Nil	21/9	21/10	53pm	50pm	✠Webber Electro 12½p	52pm	−1
$US1.72	Nil	—	—	115pm	65pm	Weeks (B'muda) 10cts.	115pm	
$US1.72	Nil	—	—	130pm	80pm	Do. Aust. 10cts	130pm	

Renunciation date usually last day for dealing free of stamp duty. *b* Figures based on prospectus estimates. *d* Dividend rate paid or payable on part of capital; cover based on dividend on full capital. *g* Assumed dividend and yield. *u* Forecast dividend cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1983. H Dividend and yield based on prospectus or other official estimates for 1983-84. Q Gross. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. ⊕ Figures or report awaited. § Placing price. *p* Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation merger or take-over. ‖‖ Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ✠ With warrants. ‡ Effective issue price after scrip. † Formerly dealt in under special rule. ‡‡ Dealt in under Rule 163 (3).

PENDING DIVIDENDS

Company	Date	Announcement last year
*Armstrong Equip	Sept 21	Final nil
*BAT Inds	Sept 21	Interim 2.5
*Bank of Scotland	Sept 20	Interim 10.5
*Barratt Devs	Sept 20	Final 8.85
Bejam	Oct 13	Final 1.5
Bell (A.)	Oct 6	Interim 3.5
*Bilton (P.)	Oct 3	Final 3.8
Blackwood Hodge	Sept 9	Interim 0.5
*Bowthorpe	Oct 11	Interim 1.673
*Brent Chemicals	Sept 27	Interim 0.6
British Electric Traction	Sept 2	Final 6.137
British Home Stores	Oct 20	Interim 1.75
Brooke Bond	Oct 19	Final 2.655
Bryant	Oct 18	Final 3.0
*Cape Indust.	Oct 4	Interim 1.7
*Coats Patons	Oct 13	Interim 1.4
*Combined English Stores	Sept 27	Interim due
Currys	Oct 11	Interim 1.0
*DRG	Sept 28	Interim 3.0
*Dalgety	Sept 20	Final 11.0
Debenhams	Oct 8	Interim 2.041
Dunlop	Sept 23	Interim 2.0
Finlay (J.)	Oct 7	Interim 2
*Fisons	Sept 19	Interim 5.0
Freemans	Oct 4	Interim 1.9
Gill & Duffus	Oct 20	Interim 3.6
Glaxo	Oct 11	Final 9.5
Grattan	Oct 8	Interim 1
Habitat Mothercare	Sept 6	Final 2.8
*Hall Eng	Sept 23	Interim 3.41
*Hambro Life	Oct 6	Interim 4.025
Hammerson Property	Oct 15	Interim 3.0
Harrisons & Crosfield	Oct 26	Interim 7.5
*Harris Queensway	Sept 29	Interim 1.67
Hawker Siddeley	Oct 20	Interim 3.7
*House of Fraser	Sept 29	Interim 2
*Inchcape	Sept 27	Interim 7.15
*Ibstock Johnsen	Oct 11	Interim 1.5
*Laporte	Sept 21	Interim 3.5
London Brick	Oct 28	Interim 1.951
Marks & Spencer	Oct 26	Interim 1.85
*Menzies (J.)	Sept 22	Interim 1.6
Mills and Allen Intl	Sept 22	Final 16.0
Minet	Oct 7	Interim 2.45
*Molins	Oct 3	Interim 2.2
Mowlem (J.)	Oct 14	Interim 2.1
*NEI	Sept 27	Interim 1.5
Peachey Prop	Oct 19	Final 3.0
*RMC	Sept 21	Interim 3.7
*RTZ	Sept 21	Interim 5.5
Rockware	Oct 13	Interim nil
*Rowntree Mackintosh	Sept 22	Interim 2.7
*Rugby Portland Cement	Oct 3	Interim 2.6
*Scottish Metropol. Prop	Oct 12	Final 2
Senior Eng	Oct 12	Interim 0.75
*Tarmac	Sept 19	Interim 3.2
*Telephone Rentals	Oct 19	Interim 2.0
*Travis and Arnold	Sept 26	Interim 1.4
*Steetley	Sept 22	Interim 4
UBM	Oct 28	Interim 1
UEI	Oct 14	Interim 1.8
*Vickers	Sept 22	Interim 4.55
*Wimpey (G.)	Sept 29	Interim 0.85

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

Closing prices September 16

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
17¾	6¼	AAR	.44	2.9	21	16	15	14¾	15	+¼
41⅞	29½	ACF	1.40	3.4	49	4567	u42	40⅞	41¼	
20	14½	AMF	.50	3.1		300	16⅜	15½	16¼	
38¾	13¾	AMR Cp			44	5585	30	28¾	29¾	+1¼
18⅞	14½	AMR	pf2.18	12		30	18¼	18⅛	18¼	+⅛
33⅝	24⅞	AMR	pf2.13	6.5		90	32⅞	31⅞	32⅞	+⅝
15¾	2½	APL				34	14¾	14⅝	14⅝	
55	31¼	ARA	2.05	4.1	13	75	50¾	50¼	50½	−⅛
73⅞	42¾	ASA	3a	4.6		688	65¾	62⅞	64¾	+1¾
33¾	9¾	AVX	s .32	1.2	68	105	27	26½	26⅞	+½
50¾	34¼	AbtLab	1	2.1	18	603	47¼	46⅝	46⅞	+¼
30⅛	24	AccoW	n.50	2.0	19	62	25	24½	24⅝	
27½	16¾	AcmeC	.40	1.7		37	24⅛	24	24	−⅛
14⅞	6⅞	AcmeE	.32b	2.8	281	14	11¼	11⅛	11¼	−⅛
21½	5¼	AdmDg	.04	.2	17	24	20⅝	20	20¾	+½
17⅞	14	AdaEx	1.73e	10		136	17	16⅝	16⅞	−½
19¾	6⅞	AdmMl	.24	1.4	9	8	17	16⅞	17	
18¾	6½	Advest	s.12	.8	9	76	15½	15¼	15½	+¼
34⅞	8⅞	AMD	s		67	1936	31⅛	29⅝	30¾	+1
44⅞	32⅞	AetnLf	2.64	7.1	7	1794	37¼	36¼	37	+⅝
65	52½	AetL	pf5.18e	9.2		1525	56⅞	56¼	56⅞	−½
40½	13½	Ahmns	.60	2.0	17	492	29⅞	29¼	29¾	+⅛
7⅞	2⅞	Aileen				62	5½	5⅜	5½	+⅛
51	26½	AirPrd	1	2.1	14	789	48½	47⅞	48⅞	−¼
27¼	12½	AirbFrt	.60	2.5	24	510	24¼	24⅛	24¼	
2⅝	1½	AlMoa	.6		17	148	1⅞	1¾	1⅞	
33½	27	AlaP	pfA3.92	13		11	30¼	30	30¼	+¼
7⅞	6⅛	AlaP	dpf.87	13.		37	7	6⅞	6⅞	
74½	60⅞	AlaP	pf 9	13.		z20	67¼	67¼	67¼	−¼
99	80½	AlaP	pf 11	12.		z40	94½	94½	94½	
81½	63⅝	AlaP	pf9.44	13		102	72⅞	72	72	+1
70	55½	AlaP	pf8.28	13		z100	63	62⅞	62⅞	−⅛
24½	15	Alagsco	1.76	7.8	7	18	22⅞	21⅞	22⅞	+1
18⅞	6¼	AlskAir	.12	.7	12	921	16⅞	16⅛	16½	+¼
24¼	12¾	Alberto	.54	3.4	16	7	16	15⅞	16	+¼

Continued on Page 25

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AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing prices September 16

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Continued on Page 26

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Continued from Page 24

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Continued on Page 26

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a–dividend also extra(s). b–annual rate of dividend plus stock dividend. c–liquidating dividend. cld–called. d–new yearly low. e–dividend declared or paid in preceding 12 months. g–dividend in Canadian funds, subject to 15% non-residence tax. i–dividend declared after split-up or stock dividend. j–dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k–dividend declared or paid this year, an accumulative issue with dividends in arrears. n–new issue in the past 52 weeks. The high-low range begins with the start of trading. nd–next day delivery. P/E–price-earnings ratio. r–dividend declared or paid in preceding 12 months, plus stock dividend. s–stock split. Dividends begins with date of split. sls–sales. t–dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u–new yearly high. v–trading halted. vi–in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd–when distributed. wi–when issued. ww–with warrants. x–ex-dividend or ex-rights. xdis–ex-distribution. xw–without warrants. y–ex-dividend and sales in full. yld–yield. z–sales in full

WORLD STOCK MARKETS

Indices

NEW YORK — DOW JONES

	Sept. 16	Sept. 15	Sept. 14	Sept. 13	Sept. 12	Sept. 9	1983 High	1983 Low	Since C'mpil'tn High	Since C'mpil'tn Low
● Industr'ls	1225.71	1216.04	1228.47	1224.09	1229.07	1239.74	1248.30 (16/6)	1027.04 (3/1)	1248.30 (16/6/83)	41.22 (2/7/32)
H'me Bnds	71.15	71.13	71.24	71.34	71.31	70.08	77.84 (9.5)	69.85 (9/8)	—	—
Transport.	572.73	561.40	563.69	561.05	566.16	569.66	590.65 (27/6)	434.24 (3/1)	590.65 (27/6/83)	12.32 (8/7/32)
Utilities	131.89	132.15	131.74	131.21	132.25	131.17	132.90 (26/7)	119.51 (3/1)	163.32 (20/4/69)	10.5 (28/4/42)
TradingVol 000's	75,530	70,420	73,370	73,970	114,020	77,990	—	—	—	—

● Day's high 1232.72 (1232.95) low 1210.16 (1213.01)

	Sept. 9	Sept. 2	Aug. 26	Yearago (Approx)
Indust'l div. yield %	4.48	4.57	4.66	6.00

STANDARD AND POORS

	Sept. 16	Sept. 15	Sept. 14	Sept. 13	Sept. 12	Sept. 9	1983 High	1983 Low	Since Cmpil'tn High	Since Cmpil'tn Low
Indust'ls	187.38	185.26	186.46	185.81	186.62	188.46	193.22 (22/6)	154.95 (3/1)	193.22 (22/6/83)	3.52 (30/6/32)
Comp's'te	166.24	164.38	165.36	164.80	165.48	166.92	170.99 (22/6)	138.34 (3/1)	170.99 (22/6/83)	4.40 (1/6/32)

	Sept 14	Sept. 7	Aug. 31	Year ago (Approx)
Indst'l div. yield %	3.95	3.89	3.98	6.15
Indust'l P/E ratio	14.33	14.58	14.32	9.12
Long Gov. Bond yield	11.59	11.61	11.86	11.99

N.Y.S.E. ALL COMMON

Sept. 16	Sept. 15	Sept 14	Sept. 13	1983 High	1983 Low
96.17	95.23	95.70	95.41	99.01 (22/6)	80.92 (24/1)

Rises and Falls

	Sept. 16	Sept 15	Sep. 14
Issues Traded	1,915	1,909	1,927
Rises	997	644	781
Falls	541	859	713
Unchanged	377	406	433
New Highs	36	33	27
New Lows	12	11	5

MONTREAL

	Sept. 16	Sept. 15	Sept. 14	Sept. 13	1983 High	1983 Low
Industrial	454.42	455.82	458.77	457.70	462.08 (9/9)	351.18 (4/1)
Combined	427.29	428.92	432.19	430.47	432.78 (9/9)	375.12 (4/1)
TORONTO Composite	2535.3	2544.8	2568.6	2560.6	2578.2 (8/9)	1949.8 (4/1)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
COMW Ed	1,460,600	27½	−⅛	IBM Corp	819,700	123⅛	+1⅜
Mer Lynch	1,243,400	36⅞	+⅞	Chrysler PR	816,100	38	+⅛
ATT	974,100	67⅛	+¾	LTV	723,000	17½	+⅜
Bristol MY	926,500	38½	+1⅛	Gen Motors	677,300	71⅛	+⅞
Am Express	873,100	38⅛	+⅝	Diam Sham	664,400	25¾	+⅝

	Sept. 16	Sept. 15	Sept. 14	Sept. 13	1983 High	1983 Low
AUSTRALIA						
All Ord. (1/1/80)	716.4	724.4	725.8	731.7	738.7 (12/9)	487.8 (4/1)
Metals & Minis. (1/1/80)	577.8	587.0	598.1	603.8	614.2 (5/9)	411.8 (4/1)
AUSTRIA						
Credit Aktien (2/1/62)	55.12	55.20	56.14	55.15	58.8 (5/5)	48.48 (15/2)
BELGIUM						
Belgian SE (31/12/63)	131.18	131.34	131.40	132.06	134.45 (1/8)	100.50 (4/1)
DENMARK						
Copenhagen SE (3/1/83)	(u)	200.08	201.11	204.22	204.22 (13/9)	100.00 (3/1)
FRANCE						
CAC General (31/12/82)	133.7	132.9	135.0	134.2	137.7 (25/8)	96.1 (3/1)
Ind Tendance (31/12/82)	142.9	141.9	141.9	143.1	146.3 (24/8)	99.0 (5/1)
GERMANY						
FAZ-Aktien (31/12/58)	308.38	309.46	307.86	310.42	331.65 (7/7)	241.88 (26/1)
Commerzbank (Dec1953)	915.2	917.7	912.7	921.1	966.3 (7/7)	727.8 (25/1)
HONG KONG						
Hang Seng Bank (31/7/64)	816.11	898.86	893.06	906.26	1102.64 (21/7)	761.61 (4/1)
ITALY						
Banca Comm Ital. (1972)	196.21	196.73	197.48	197.79	214.98 (21/8)	160.45 (10/1)
JAPAN**						
Dow Average (16/5/49)	9166.68	(c)	9274.11	9299.38	9355.66 (7/9)	7803.18 (25/1)
Tokyo New SE (4/1/68)	677.12	(c)	682.08	685.65	688.55 (7/9)	574.51 (25/1)
NETHERLANDS						
ANP-CBS General (1970)	137.3	138.6	139.3	139.6	143.4 (22/8)	100.1 (4/1)
ANP-CBS Indust (1970)	109.6	110.5	111.4	112.6	116.5 (22/8)	85.5 (4/1)
NORWAY						
Oslo SE (4/1/83)	210.19	212.72	210.88	210.80	214.45 (16/8)	99.01 (4/1)
SINGAPORE						
Straights Times (1966)	963.65	965.40	969.46	978.02	992.62 (25/8)	712.29 (6/1)
SOUTH AFRICA						
Gold (1958)	898.6	899.7	923.2	934.6	1089.5 (1/2)	694.3 (28/3)
Industrial (1958)	951.7	949.9	948.0	946.5	968.7 (29/6)	740.9 (5/1)
SPAIN						
Madrid SE (31/12/82)	115.37	116.88	116.23	115.71	120.82 (13/7)	98.32 (11/1)
SWEDEN						
Jacobson & P (1/1/58)	1474.25	1508.49	1507.33	1504.74	1528.90 (6/9)	898.19 (6/1)
SWITZERLAND						
SwissBankCpn. (31/12/58)	336.2	338.1	338.6	337.1	347.0 (4/8)	294.4 (4/1)
WORLD						
Capital Intl. (1/1/70)	—	177.8	178.5	178.7	182.7 (22/6)	154.8 (3/1)

(**) Saturday Sept. 10: Japan Dow (c) TSE (c).
Base values of all indices are 100 except Australia All Ordinary and Metals—500. NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975. † Excluding bonds. ‡ 400 Industrial. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

AUSTRIA

1983 High	1983 Low	Sept. 16	Price %
220	206	Credit'stalt Pfd.	212
370	181	Goesser	320
400	358	Interunfall	400
217	201	Laenderbank	211
400	255	Perimooser	341
179	148	Steyr Daimler	153
262	171	Veitscher Mag	208

BELGIUM/LUXEMBOURG

1983 High	1983 Low	Sept. 16	Price Frs.
1,420	990	ARBED	1,530
4,750	3,700	Bank Int A Lux	4,650
3,300	2,030	Bekaert B	2,905
2,090	1,595	Ciment BR	1,965
182	86	Cockerill	149
4,700	3,660	Delhaize	4,690
2,525	1,875	EBES	2,330
6,400	4,460	Electrobel	6,190
2,900	2,475	Fabrique Nat	2,475
3,200	2,710	G.B. Inno	2,920
2,400	1,450	GBL Brux	2,250
2,500	1,740	Gevaert	2,470
5,080	3,600	Hoboken	4,750
2,000	1,724	Intercom	1,820
6,510	4,300	Kredietbank	6,350
9,150	4,300	Par. Hldgs.	9,150
6,040	4,610	Petrofina	6,000
7,200	5,910	Royale Belge	7,050
3,000	2,305	Soc. Gen. Banq	2,880
2,025	1,200	Soc. Gen. Belge	1,870
5,050	3,755	Sofina	5,040
3,290	2,160	Solvay	3,200
3,500	2,645	Traction Elect.	3,270
4,280	2,620	UCB	3,750
4,400	2,210	Vieille Mont	3,260

DENMARK

1983 High	1983 Low	Sept. 16	Price %
556.4	339.6	AarhusOlie	535
320	160	Andelsbanken	315
698	321	Baltica Skand	594
300	178.6	CopHandelsbank	293
830	408.6	D. Sukkerfab	795
322.6	197	Danske Bank	313
179.4	88.6	East Asiatic	164.6
1,350	650	Forenede Brygg.	1,275
298	148	Forenede Damp.	210
557	176	GNT Hldg.	557
720	270	I.S.S.B.	703
615	297	Jydske Bank	615
3,350	1,955	Novo Ind.	3,340
324	183.4	Privatbanken	315
310	157.6	Provinsbanken	310
324.6	170	Smidth (FL)	273
1,078	583	Sophus Berend.	1,047
354.6	97.2	Superfos	344

CANADA

[illegible]

ITALY

1983 High	1983 Low	Sept. 16	Price Lire
31,900	28,500	Banca Com'le.	29,1[illegible]
253	167.6	Bastogi IRBS	221
2,590	1,688	Centrale	1,8[illegible]
6,167	3,699	Credito Varesino	[illegible]
3,279	1,635	Fiat	3,00[illegible]
77	33.2	Finsider	45.
147,450	104,125	Generale Assic	139,10[illegible]
2,849	1,920	Invest.	2,84[illegible]
48,200	27,600	Italcementi	45,41[illegible]
234.6	99	Montedison	207
5,550	1,901	Olivetti	3,36[illegible]
3,099	2,315	Pirelli Co.	2,70[illegible]
1,850	1,173	Pirelli Spa.	1,61[illegible]
1,286	671	Snia Viscosa	1,145
16,999	9,970	Toro Assic.	11,401
10,500	6,950	do. Pref	9,011

NETHERLANDS

1983 High	1983 Low	Sept. 16	Price Fls
174.5	98	ACF Holding	156
178	123	Ahold	171.5
80.3	34.9	AKZO	77
409	293.0	ABN	358.5
129	100.0	AMEV	123
66.8	41.9	AMRO	59.6
200.0	143.5	Bredero Cert	171
52.3	29.0	Boskalis Westm.	45.7

[illegible]

HONG KONG

1983 High	1983 Low	Sept. 16	Price H.K.$
35.25	24.6	Bank East Asia	26.4
0.87	0.87	Carrian Invest.	0.87
10.9	6.95	Cheung Kong	7.35
17.0	12.2	China Light	14.1
3.05	6.60	Hang Lung Devel.	2.10
64.5	35.0	Hang Seng Bank	40.25
6.35	4.55	HK Electric	5.6
4.60	2.47	HK Kowloon Wh.	3.75
5.00	3.27	HK Land	3.85
8.77	6.45	HK Shanghai Bk.	7.3
39.75	28.5	HK Telephone	36
19.2	9.25	Hutchison Wpa	12.6
16.1	11.5	Jardine Math	12.6
3.75	2.19	New World Dev.	2.67
3.0	2.3	Orient O'seas	2.7
5.1	3.37	O'seas Trust Bk.	3.6
7.25	4.5	SKH Props.	6.9
17.2	8.15	Swire Pac A.	13.9
4.10	2.32	Wheel'k Mard A.	3.1
2.40	1.75	Wheel'k Marit'e	1.90
1.93	1.21	World Int. Hldgs.	1.53

JAPAN

1983 High	1983 Low	Sept. 16	Price Yen
1,130	805	Ajinomoto	1,000
2,780	1,610	Alps Electric	2,630
808	515	Amada	750
412	262	Asahi Chem	378
621	510	Asahi Glass	599

[illegible]

NORWAY

[illegible]

AUSTRALIA

[illegible]

SINGAPORE

[illegible]

FRANCE

[illegible]

GERMANY

[illegible]

SWEDEN

[illegible]

SWITZERLAND

[illegible]

SOUTH AFRICA

[illegible]

SPAIN

[illegible]

NOTES—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

AMERICAN STOCK EXCHANGE CLOSING PRICES

Continued from Page 25

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
17⅛	3⅝	Supind	1.511	9.7	15	84	15⅝	15⅛	15⅝	+¼
8½	3⅛	Susqueh			13	83	5⅞	5⅞	5⅞	−⅛
37⅞	19½	Swthin	1.04e	3.7	7	4	28⅝	28⅛	28⅛	+¼
13½	3⅛	SysPln				16	11⅛	11	11⅛	+⅜
		T-T-T								
17⅛	7⅛	TBar	.57t	5.3		17	10⅝	10⅝	10⅝	+½
11⅛	5⅛	TEC	.04j			13	6⅞	6⅞	6⅞	−⅛
40⅛	10	TIE	s		36	917	35⅛	34⅝	35⅛	+⅛
42⅛	17⅛	WangC	s.07	.2	29	21	33⅛	32½	33⅛	+2
42⅛	7⅛	Wards	s.10	.2	24	40	42	41½	42	+1
20⅛	5½	WrnC	wt			170	7⅛	7⅛	7⅛	−⅛
15½	1⅛	WshHm			7	25	11⅛	11⅛	11⅛	−½
71⅛	39⅛	WshPst	.68	1.0	16	45	64⅝	64⅛	64⅛	−⅛
22½	11⅝	WRIT	1.28	7.4	6	38	17⅛	17⅛	17⅛	−⅛
14⅝	8⅛	Watsco	.30	2.5	18	11	12⅛	12	12	−½
13½	8	Wthfrd				41	10⅝	10⅝	10½	
22⅛	5½	Webcr	6		31	41	17⅛	17½	17⅛	−⅛
		X-Y-Z								
50	31	Xerox		3	7.0	11	2145	[illegible]		
53⅛	49⅛	Xerox	pf5.45	11.		166	[illegible]			
30⅛	14⅛	XTRA		2.3	26	16	[illegible]			
31⅛	18⅛	ZaleCp	1.28	3.9	30	x169	[illegible]			
21⅞	13⅛	Zapata	.84	4.2	6	892	[illegible]			
52⅛	21⅞	Zayre	s.30	.7	15	138	[illegible]			
34½	10⅝	ZenithR				127916	[illegible]			
38⅛	18⅛	Zero	s.48	1.4	22	6	[illegible]			
37⅞	21⅛	Zurnin	1.32	5.0	9	138	[illegible]			

[illegible]

NEW YORK CLOSING PRICES

Continued from Page 25

[illegible]

INSURANCE

Underwriting losses fall but trend remains weak

BY ERIC SHORT

THE UK's 10 main quoted insurance groups have reported interim results for this year. Their progress, or lack of it, in the main world insurance markets can now be measured and an opinion formed of underlying trends.

Results for 1982's first half were strongly influenced by severe winter weather on both sides of the Atlantic. Since then, nature has been kind to insurance companies. There has been a relative absence of natural disasters.

The exception was Australia's bush-fires. There was loss of life and property.

Overall, the 10 companies' worldwide underwriting losses declined slightly, from £511.1m to £466.4m, an improvement of less than 10 per cent. Thus, considering the effect of better weather the underlying underwriting trend is still weak. This reflects overcapacity in most markets.

Investment income in sterling terms remained buoyant. It has risen by nearly 14 per cent, from £594.7m to £677.6m. Higher life-profits also helped boost the net profit rise of 61 per cent, from £135.9m to £218.7m.

An analysis of individual territories shows that superficially the UK has shown a tremendous improvement. Underwriting losses were reduced from £196.7m to £144.7m. This improvement, however, is more than accounted for by last year's severe weather losses.

Thus on the personal insurances side the improvement in house-building account arising from the better weather was partially offset by losses on house contents arising from the fast-growing number of theft claims.

Underwriting losses on motor insurance in the UK are rising from a combination of inadequate premium rates and the growing number of claims.

UK insurance companies claim to have stopped the decline in results on commercial-fire accounts. The trend, however, has not yet reversed. Liability business remains a problem.

The insurance cycle in the U.S., the world's largest insurance market, continues to decline and the ten companies' underwriting losses rose in sterling terms from £170.2m to £212.8m.

The overall U.S. insurance market is weak but the insurance companies are hopeful of an upturn next year. The companies involved are taking drastic steps to rationalise their U.S. operations and review their portfolios.

Canada is at last coming right for UK insurance companies. The remedial action taken over the past few years, including massive premium increases, has turned a loss into a small profit. This, however, has been achieved only at the cost of a smaller share of the market.

Underwriting losses in Australia have been cut in spite of the bush-fires. UK companies operating in Australia have been taking similar remedial action as in Canada and would have shown similar improvements but for the bush-fires.

The second half of the year usually shows better results for insurance companies by comparison with the first half, if only because the weather is usually better. Thus one would expect the first-half improvement to be maintained.

Nevertheless the insurance companies have shown usual caution in interim dividend announcements.

INTERIM RESULTS OF 10 MAJOR UK INSURANCE COMPANIES*

Underwriting profit	1983 £m	1982 £m	Percentage change
UK	−144.7	−196.7	
U.S.	−212.8	−170.2	
Canada	+ 4.8	− 28.0	
Australia	− 10.8	− 12.1	
Europe	− 36.8	− 35.0	
Other	− 66.1	− 69.1	
Total underwriting	−466.4	−511.1	+ 8.7
Investment income	677.6	594.7	+13.9
Net profits	218.7	135.9	+60.9

* Commercial Union, Eagle Star, General Accident, GRE, Legal & General, Pearl, Phoenix, Prudential, Royal, Sun Alliance.

Source: Wood, Mackenzie.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY

COMPANY MEETINGS—
Dalgan Hldgs. The Connaught Rooms. Great Queen Street, WC, 12.00
Joseph (Leopold) Hldgs., Haberdashers Hall, Staining Lane, E.C., 12.00
Munton Bros. Dorland House, 14-16 Regent Street, S.W., 12.00
Scoteros Albany Hotel, Bothwell Street, Glasgow, 12.00
Siebe Gorman Hldgs. Cavendish Hotel, Jermyn Street, S.W., 12.30
Stonehill Hldgs. Churchill Hotel, Portman Square, W., 11.30
Vibroplant Queens Hotel, Leeds, 1.00

BOARD MEETINGS—
Finals:
Blue Bird Confectionery
Worthington (A. J.)
Interims:
Beatson Clark
Bifurcated Eng
Bodycote Intnl
Fisons
Lovell (G. F.)
Pittard
Ransomes Sims and Jefferies
Renown Inc
Tarmac

DIVIDEND & INTEREST PAYMENTS—
Beales (John) Assoc 6½pcLn 1989-94 1½pc
Dalgan Hldgs 3.825p
Investments NV Gtd Fltg Rate Notes 1984 $(Var) $50.38
Do. Gtd Fltg Rate Notes 1988 $50.38
Mercantile House Hldgs 15p
Plastic Constructions 0.836p
Ransom (William) 5p
Ransomes Sims and Jefferies 5½pcCumPf 1.925p
Spencer (George) 4pcCumPf 2p
Treasury 11½pc 2001-04 5¾pc
Wheeler's Restaurants 4.57p

TOMORROW

COMPANY MEETINGS—
Allied Colloids Group, Cleckheaton Road, Low Moor, Bradford, 12.30
Dura Mill, 3, China Lane, Piccadilly, Manchester 3.00
Group Investors, 2, St Mary Axe, E.C., 12.30
Hanover Inv (Hldgs), Connaught Rooms, Great Queen Street, W.C., 12.30
London Inv Tst, The Banqueting Hall, Shaftesbury Place, Barbican, E.C., 12.00
New Court Nat Res, New Court, St Swithin's Lane, E.C., 3.00
Ratners (Jewellers), Churchill Hotel 30, Portman Square, W., 12.00

BOARD MEETINGS—
Finals:
Baillie Gifford Japan Tst
Barratt Devs
Dalgety Elders IXL
Ind Fin Inv Cpn
Minerals and Resources Cpn
Utd Real Prop Tst
Interims:
Bk of Scotland
Boase Massimi Pollitt
Cussins Prop
Dares Est
Juliana's
Kleinwort Benson Lonsdale
Rosedimond Inv Tst
Solicitors' Law Stationery Soc
U.S. Deb Cpn

DIVIDEND & INTEREST PAYMENTS—
Cameron (J. W.) 4¼pcDb 1973-83 1.1875pc
Do. 6¼pc 1978-83 1.5625pc
Do. 6¾pc 1988-93 1.6875pc
Joseph (Leopold) Hldgs 9.375p
Lone Star Inds 47.5 cts
M. & G. American and General 0.5p
Do. Magnum Fund 6.5p
RIT and Northern 4.6p
Sogomana Grp 7p
Stonehill (Hldgs) 2p

WEDNESDAY SEPTEMBER 21

COMPANY MEETINGS—
Energy Finance and Gen Tst Hldgs, Dauntsey House, Frederick's Place, Old Jewry, E.C., 12.00
Linfood Hldgs Howard Hotel, Temple Place, Strand, W.C., 10.30
Tyne Plywood (Hldgs), Kingsway, Team Valley, Gateshead, 10.30
Utd Computer and Technology Hldgs, Dauntsey House, Frederick's Place, Old Jewry E.C., 4.00
Western Board Mills, Angel Hotel, Castle Street, Cardiff, 12.00

BOARD MEETINGS—
Finals:
Armstrong Equipment
Ferry Pickering
Kalamazoo
Sheafbank Prop Tst
Interims:
Al Ind Prods
BAT Inds
Jove Inv Tst
Laporte Inds
Mackay (Hugh)
Maclellan (P. and W.)
Owen Owen
RMC
Rio Tinto-Zinc

DIVIDEND & INTEREST PAYMENTS—
New Court Natural Resources 1.2p
Pfizer Inc 29 cts
RBC North American Fund Ptg Red Pf 0.4 cts
Victoria Carpet Hldgs 0.2p

THURSDAY SEPTEMBER 22

COMPANY MEETINGS—
British Build and Eng Appliances, University Arms Hotel, Cambridge, 12.00
Cooper Inds, Wolverhampton Chamber of Commerce, 93, Tettenhall Road Wolverhampton, 11.00
Moran Tea Hldgs, Sir John Lyon House, Upper Thames Street, E.C., 12.00
P.H. Industries, Dorland House, 14-16 Regent Street SW, 11.00
Phoenix Timber, Phoenix House, Manor Way, New Road, Rainham, Essex, 12.00
Pitman, 6, Southampton Place, W.C., 12.00
Redland, Plaisterers Hall, 1, London Wall, E.C., 12.15
Security Centres Hldgs, 113, Southwark Street, S.E., 12.00
Willaire Systems, Bedford Moat House, 2, St Mary's Street, Bedford, 12.00

BOARD MEETINGS—
Finals:
Mucklow (A. and J.)
Park Place Inv
Regentcrest
Interims:
Astbury and Madeley
Gen Investors and Trustees
Lorlin Elecs
Memec
Menzies (John)
Morrison (William) Supermarkets
NMW Computers
Newarthill
Rowntree Mackintosh
Sandhurst Marketing
Steetley
Vickers
Whatman Reeve Angel
Wills (Geo)

DIVIDEND & INTEREST PAYMENTS—
Adams and Gibbon 1.5p
Finance NV Gtg Fltg Rate Subord Nts 1994 $25.56
Exchequer 13¼pc 1992 6⅝pc
Do. 12½pc 1990 6¼pc
Do 12pc Cnv 1985 6pc
Halliburton 40 cts
Siam Commercial (Cayman) Gtd Fltg Rate Nts 1984 $50.47
Wellman 0.1p
Western Board Mills 5.3p

FRIDAY SEPTEMBER 23

COMPANY MEETINGS—
Candecca Res, Churchill Hotel, Portman Square, W., 12.00
Cowan de Groot, Great Eastern Hotel, Liverpool Street, E.C., 11.00
Marling Inds, Charing Cross Hotel, W., 12.00
Midland Tst, Britannic Ass. House, Moor Green, Moseley, Birmingham, 3.30
Sommerville (William), Dalmore Mills, Milton Bridge, Penicuik, Midlothian, 2.30
Unitech, Howard Hotel, Temple Place, Strand, W.C., 12.00

BOARD MEETINGS—
Finals:
Maynards
Westminster and Country Props
Interims:
AC Cars
Barker and Dobson
BL
Dinkie Heel
Hall Eng
Liberty
LASMO "Ops"

DIVIDEND & INTEREST PAYMENTS—
Barker and Dobson Grp, 12pcUnsLn 1977-1984 6pc
Black and Decker 13 cts
C.S.C. Inv Tst 3.5p
Chesebrough-Ponds 46 cts
Chemical New York Gtd Fltg Rate Subord Nts 1994 $260.35
Dew (George) 2.3p
East Lancashire Paper Grp 1.66p
Energy Finance and Gen Tst Hldgs 0.71p
Essex Water 3.5pc (Fmly 5pc) Cons 1.75p
Do. 3.5pc (Fmly 5pc) New Ord 1.75p
European Inv Bank 11pcLn 2002 (Reg) 5½pc
Girozentrale und Bank Der Ost Spark Fltg Rate Nts 1991 $26.19
Mulford and White 1p
Petrolane 12.5 cts
Scandinavian Finance BV Fltg Rate Series No3 1993 $498.8
Scotland Int Fin BV Gtg Fltg Rate Nts 1992 $253.96
Serck 10¾pcDb 1991-96 2.6875pc
Silverthorne Grp 0.5p
Thomas Nationwide Transport 3 cts A$
Do New Ord 4 cts A$
Utd Computer and Technology Hldgs 1.1p
Urquijo Int NV Gtd Fltg Rate Nts 1986 $51.11
Whatlings 1.25p

SATURDAY SEPTEMBER 24

DIVIDEND & INTEREST PAYMENTS—
Sidlaw Grp 7½pcLn 2003-08 1⅞pc
Treasury 2½pc Index-Linked 2001 £1.3192

SUNDAY SEPTEMBER 25

DIVIDEND & INTEREST PAYMENTS—
Assoc British Foods 5½pcUnsLn 1987-2002 1⅜pc
7½pcLn 1987-2002 1⅞pc
Cavenham 10½pcUnsLn 1991-96 2⅝pc
Do 10¼pcUnsLn 2.5625pc
Centrovincial Est 6¼pcUnsLn 1988-93 1.5625pc
Hanson Tst 9¾pcUnsLn 2001-06 2.4375pc
Lonrho 9pc2ndDb 1987-92 2¼pc
Do. 12⅜pc2ndDb 1985-90 3.09375pc
Do. 12⅞pc2ndDb 1980-83 3.21875pc
M. & G. Commodity and Gen 1.2p
Russell's Gravesend Brewery 6pcPf 2.1p

Carton company plans expansion

A company which bought out the assets of a former carton manufacturer which went into receivership just over a year ago now has full order books and expansion plans.

NSC Cartons, of Clydebank, Scotland's largest independent specialist carton printers, has created 45 jobs since it was launched 11 months ago and plans to provide 10 more in the next few weeks.

It was formed when a management consortium backed by the Scottish Development Agency, the Scottish Economic Planning Department and the Clydesdale Bank bought the assets of New Safety Containers, a company which went into receivership after trading for 60 years. More than 60 jobs were lost.

Awards for sailing prowess launched

THE SILK CUT awards, designed to reward those who have made an outstanding contribution to the nautical and marine world, were launched last week by Mr Chay Blyth, the yachtsman, at the Southampton international boat show.

The awards cover seamanship, rescue, design (boat building and equipment), racing and club service. The eight judges, presided over by Mr Blyth, include representatives from leading yachting organisations as well as the Royal National Lifeboat Institution and HM Coastguard.

BUSINESSMANS DIARY

UK TRADE FAIRS AND EXHIBITIONS

Current
Chelsea Antiques Fair (0727 56069) (until Sept 24) — Chelsea Old Town Hall

Current
Great Home Entertainment Show (01-486 1951) (until Sept 25) — Olympia

Sept. 25-30
International Motor Accessory and Garage Equipment Exhibition — AUTOQUIP/GARAGEQUIP (01-235 7000) — Earls Court

Sept. 26-28
"Can You Make It?" Exhibition, "A Challenge to British Industry" (01-248 4444) — West Centre Hotel, SW6

Sept. 28-Oct. 2
The 6th Personal Computer Show (01-486 1951) — Barbican

Oct. 1-3
Salon International (01-643 8404) — Earls Court

Oct. 2-4
British Footwear Fair (01-739 2071) — Olympia

Oct. 4-6
Surface Mining and Quarrying Exhibition (01-637 2400) — Grand Hotel, Bristol

Oct. 4-6
Fashion Fabrex (01-385 1200) — Olympia

Oct. 4-7
Computer Trade Forum (01-747 3131) — N.E.C., Birmingham

Oct. 17-20
Computer Graphics European Conference and Exhibition (01-868 4466) — Wembley Conference Centre

Oct. 18-26
International Business Show (01-405 6233) — N.E.C., Birmingham

OVERSEAS TRADE FAIRS

Current
International Engineering Fair (021-455 9600) (until Sept. 21) — Brno

Current
International Motor Show (01-734 0543) (until Sept. 25) — Frankfurt

Sept. 19-22
International Hotel and Catering Equipment Exhibition—IGAFA (01-486 1951) — Munich

Sept. 26-30
S.E. Asian Production Machinery and Industrial Development Show—MACHINE ASIA (01-486 1951) — Singapore

Sept. 27-Oct. 1
International Chemical Plant and Engineering Exhibition — INCHEM (01-221 2043) — Tokyo

Sept. 29-Oct. 5
International Motor and Motorcycle Show (01-439 3964) — Paris

Sept. 30-Oct. 4
Toy and Gift Autumn Show (01-839 5901) — Taipei

Oct. 2-6
Middle East Construction and Municipal Services Exhibition (01-935 8200) — Kuwait

Oct. 2-5
Fashion week (01-486 1951) — Munich

Oct. 3-6
Ready-to-Wear Collections Exhibition (20121 Milan) — Milan

Oct. 3-7
International Videocommunication Market—VIDCOM (01-499 2317) — Cannes

Oct. 5-7
Hong Kong Toy and Gift Fair (01-930 7955) — Hong Kong

Oct. 23-27
2nd Building and Construction Show—Saudi Build '83 (01-486 1951) — Riyadh

Oct. 26-Nov. 1
World Telecommunication Exhibition—TELCOM (CH-1218 Grand Saconnex, Geneva) — Geneva

BUSINESS AND MANAGEMENT CONFERENCES

Current
The Institute of Cost and Management Accountants: The design and development of management information systems (01-637 2311) (until Sept. 28) — Cawthorpe House, Bourne, near Peterborough

Sept. 19-20
Business Research International: The international loan markets 1983 (01-637 4383) — Cafe Royal, W1

Sept. 19-21
British Institute of Non-destructive Testing annual conference (0604 30124) — Keele University

Sept. 20-22
Reinsurance Management Institute: Fundamentals of reinsurance (U.S. 214-721 5360) — University of Dallas

Sept. 20
Oyez IBC: The art of negotiating for company executives and professional advisers (01-236 4080) — Portman Hotel, W1

Sept. 22
Institute of Purchasing and Supply: The use of computers to aid purchasing and materials management (0780 56777) — Cumberland Hotel, W1

Sept. 26-29
ETMC: European truck maintenance conference (01-572 7313) — Sheraton Hotel, Brussels

Sept. 27
Oyez IBC: The weaponry of civil procedure (01-236 4080) — Cavendish Conference Centre, W1

Sept. 28-29
FT Conference: World financial futures (01-621 1355) — Royal Lancaster Hotel, W2

Sept. 29
Macfarlane Conferences: TV and radio—opportunities in corporate and financial advertising under the new IBA code—and the implications for Press advertising (01-637 7438) — London Press Centre, EC4

Sept. 29
The Industrial Society: Long-term pay deals (01-839 4300) — 3 Carlton House Terrace, SW1

Oct. 11-12
FT Conference: The professional personal computer, markets and strategies (01-621 1355) — InterContinental Hotel, W1

Oct. 20-21
FT Conference on competition: Mergers, Acquisitions, buy-outs and public policy (01-621 1355) — London Hilton, W1

Oct. 24-27
FT Conference: The financial services revolution—banks and non-banks in the 1980s (01-621 1355) InterContinental Hotel, W1

Oct. 26-27
FT Conference: Banking and electronic technology (01-621 1355) Royal Lancaster Hotel, W2

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

Authorised Units—continued

Equity & Law Un Tst Mngs (a) (b) (c)
Amersham Rd, High Wycombe. 0494 33377
Euro Tst Acc 58.1 62.4xd −0.1 1.66

Robert Fleming & Co Ltd
8 Crosby Square, EC3A 6AN. 01-638 5858
AmExFd* £270.36 276.23 +0.94 0.63
JapExFd* £155.23 160.28 −0.20 1.15
Next subscription day Oct 3 1983
*Fleming American Property Unit Trust.
Latest issue price (15 8) US$10 567.
Units are issued on Feb 15, May, Aug, Nov.
*Fleming Property Unit Trust
Latest issue price (24 6) £2 067.
Units are issued on March 25, June 24, Sept 29 & Dec 25.
*Unauthorised.

Guardian Royal Ex Unit Mgrs Ltd (a)
Royal Exchange EC3V 3LS. 01-638 2020
(b)GREGtFI 112.1 116.5xd +0.5 9.97
(g)GRENAm 93.2 100.3 −1.4 2.49
(g)GREPacT 102.2 109.9 −0.9 1.14
(b)PrptySIT 94.5 101.7 −0.8 2.15
(b)GREGthEq 96.7 104.0 −0.8 2.54
GRESmlC 108.9 117.1 −0.9 1.53
G'hill Tst 178.1 184.5xd −1.8 3.46

H.B.L. Unit Trust Mngrs Ltd (a) (c) (g)
Premier NT Admin. 5 Rayleigh Rd. Hutton, Brentwood, Essex. 0227-227300
SmllrCosTst 50.4 53.1 −0.3 4.65
N Amer Tst 48.0 50.5 −0.3 2.30
JapanFarETst 50.9 53.6 +0.4 0.97
ScandinavianTst — 50.0 .... 1.50

Hexagon Services Ltd
4 Gt St Helens, London EC4P 3EP. 0708 45322
AustFrsGw 110.5 118.4 .... 1.21
BrewinsCap 83.6 88.1 .... 0.59
BrewinGrIn 75.6 79.4 .... 5.90
CanGwthFd 108.9 117.2 .... 0.96

Lawson Fund Managers Ltd (a) (c) (g)
43 Charlotte Sq. Edinbgh 2. 031-225 6001
CharlotteSqFd — 50.0 .... 2.8
Penny Sh Fd 14.0 15.0 .... 1.8
Aust & Pac 9.8 10.4 .... 0.57
High Yield 19.5 21.2xd 10.40
Do Accum 26.0 22.3xd 10.40

MGM Unit Managers Ltd
MGM House, Heene Road, Worthing. 01-623 8211
High Inc 127.9 137.5 −1.1 6.29
(Accum Uts) 129.6 139.4 −1.2 6.29
UK Growth 122.7 131.9 +0.4 3.22
(Accum Uts) 122.9 132.1 −0.5 3.22

MLA Unit Trust Management Ltd
Old Queen Street, SW1A 9JG. 01-222 8576
MLA Uts 182.1 191.2 .... 2.80
MLA Int 28.1 30.5 .... 0.82

The Money Market Trust
63 Qn Victoria St EC4N 4ST. 01-236 0952
Call Fund — — 9.63
7 Day Fund — — 9.35
†Unauthorised—Sterling Deposit Fund.

Offshore and Overseas—continued

Actibonds Investment Fund SA
37 rue Notre Dam, Luxembourg. Tel 47971
Actibonds In — $19.43 .... —

Alliance Capital Management Intl Inc
62/63 Queen St London EC4. 01-248 8881
Alliance International Dollar Reserves
Distribution Sept 6-11 (1.001431) (9.09% pa)
AIntHCCresSept14 $9.29 .... —
A Tech Fd Sept 14 $22.94 .... —
QuasarAssSept14 $62.49 .... —

Bamford Brandt Guernsey Mngt Ltd
PO Box 71, St Peter Port, Guernsey. 0481 26541
Tech&Coms £8.86 9.3 .... —
IntGrowth $17.32 18.77 .... —

Brown Shipley St Co (Jersey) Ltd
PO Box 583, St Helier, Jersey. 0534 74777
Stg Capital £16.23 16.24xd .... —
Int Bond $10.32 10.32 .... —

CAL Investments (IoM) Ltd
16 St Georges St Douglas IoM. 0624 20231
CAL C&C* 87.3 91.9 .... —
CAL Metals* 95.3 100.4 .... —
CAL Silv** 285.4 303.4 +3.9 —
CAL Gold** — — .... —
CAL Copper** — — .... —
CAL Alumin** — — .... —
Dealing days every Monday.

CAL Investments (Bermuda) Limited
PO Box 1022, Hamilton, Bermuda. (809-29) 5-5950
CAL CTR Fd 78.3 82.2 .... —
Dealing days every Monday.

Commodity Advisory Svcs (IoM) Ltd
48 Athol St, Douglas, IoM. 0624-20845
Com&FFAc 87.81 91.47 .... —
Com&FFD 87.81 91.47 .... —
Next dealing date Sept 5.

Citibank (CI) Ltd "Citifunds"
Channel Is. Transatlantic Inv Fds Ltd
Green St, St Helier. 0534-70334
U.S. $ Fund $10.244 +0.002 —
£ Sterling Fund £5.122 +0.002 —
Sw Franc Fd SwFr20.161 +0.001 —
Jap Yen Fd Y2,028.402 +0.292 —
Deutschmk Fd DM20.186 +0.002 —
Managed Fund $10.075 +0.002 —

DunVest Ltd
PO Box 887, Grand Cayman.
NAV $136.80 .... —

First Gold & Metals Trust PLC
60 St James's St, London SW1. 01-499 4341
First Gold 9.21 .... —

Forbes Securities Management Co.
PO Box 887, Grand Cayman, BWI. London Agents 01-839 3013
Gold Inc $9.38 9.89 .... —
Gold App 8.10 8.54 .... —
Dollar Inc $9.25 9.59 .... —

Framlington Overseas Fd Mngt Ltd
PO Box 71, St Peter Port, Guernsey. 0481 26541
O'seas&Gth 48.2 52.5 .... 4.00
O'seas&Gth$ 71.8 78.3 .... 4.00

GRE Intl Inv Mgmt Ltd
PO Box 194, St Helier, Jersey. 0534 27441
ManCurFd £10.10 — ... —

Grindlay Henderson Mngt Ltd
PO Box 414, St Helier, Jersey. 0534 74248
Mgd Fd £10.2337 10.7454 −0.0035
Mgd Acc £9.6996 10.1846 −0.0036
Stlg Fd £10.1943 — +0.0050
Stlg Acc £10.1378 — +0.0068
U.S. $ Fd $20.3677 — +0.0107
U.S. $ Acc $20.3031 — +0.0109
DMA DM50.3281 — +0.0080
SwFr SwFr50.3261 — +0.0070
Yen Y5046 — +1

Jardine Fleming and Co Ltd
46th Floor, Connaught Centre, Hong Kong.
Curr&Bd $12.53 — 9.40

(Accum) $17.72 — .... —
Asean $10.00 — .... —
(Accum) $10.00 — .... —
American $9.64 — .... —
(Accum) $9.64 — .... —
Mgd Curr $9.98 — .... —
(Accum) $9.98 — .... —

Lazard Brothers and Co (Jersey) Ltd
PO Box 108, St Helier, Jersey, C.I. 0534 37361
LazBrFarE $14.11 15.02 .... 1.00
CpGBd $1,293.06 1,310.28 .... 11.6
D fedBdFd $10.00 10.03 .... —
N Am Fd $10.11 10.76 .... —

Lloyds Bank International, Geneva
PO Box 438, 1211 Geneva 11 (Switzerland)
L I Dollar $97.2 100.3 .... —
L I Growth $97.2 974.5 .... 1.5
L I Income SF298.0 309.5 .... 6.5
L I Pacific SF102.0 107.5 .... —

Management International Ltd
Bk of B'muda Bldgs B'muda. 809-295-4000
Bda IBFC $16.22 16.39 .... —
Bda IBFI $11.38 11.50 .... —
Prices on Sept 9. Next dealing Sept 16.
Bda IEFC $10.17 10.38 .... —
Bda IEFI $10.17 10.38 .... —
Prices on Sept 14. Next dealing Sept 21.

Manufacturers Hanover Geofunds
PO Box 92, St Peter Port, Guernsey. 0481 23961
LA Inc $103.38 103.60 .... 9.21
LT Acc$ $124.73 124.99 .... 11.25
MIT Inc $110.13 110.69 .... 9.62
MIT Acc$ $125.45 126.09 .... 16.34

Geofund International Reserves Ltd
Sterling £5.051 +0.001 —
U.S. $ $10.101 +0.003 —
D-Mark DM20.097 +0.002 —
Swiss Fr SwFr20.065 +0.001 —
Jap Yen Y2011.4 +0.3 —
Managed Fd $10.075 +0.002 —

Marine Midland (CI) Ltd
140 B'way NY 10015 USA. 212-440-1000
Queens Hse, Don Rd, St Helier. 0534 71460
Intcurcy $1,038.89 .... —
Next sub day Oct 13.

Samuel Montagu Ldn Agents
114 Old Broad St EC2. 01-626 3434
ApSept6 SF89.85 97.53 .... 1.43
JpSept7 HK$46.46 37.95 .... —
117GpA31 $17.94 19.30 .... —
JsyFdA31 £12.80 13.94 .... —
MontFRNF $10.22 10.75 .... —
U.S. FIF $9.54 10.05 .... —

Nat Westminster Jersey Fd Mgrs Ltd
23-25 Broad St, St Helier, Jersey. 0534 70041
County Bank Currency Fund Ltd (x)
Dollar class $20.5674 +0.0046 —
Sterling class £10.2915 +0.0024 —
D-mark cl DM50.6014 +0.0055 —
Dutch Gldr DFl50.6687 +0.0038 —
Jap Yen cl Y5,086.5353 +0.7886 —

Norcap Fund Managers (Bermuda) Ltd
Bank of Bermuda Building, Bermuda. 809 29 5400
Amer Tst $11.01 11.47 .... —

Perpetual UT Managers (Jersey) Ltd
PO Box 459, St Helier, Jersey. 0534 74517
OffshrGr $1.135 1.208 .... 2.00

Rothschild Asset Management (CI)
St Julian's Ct, St Peter Port, Guernsey. 0481 26741
OC International Reserves Ltd
Bel Francs BFr861.12 +0.170 7.15
Canadian $ C$37.035 +0.010 7.83
D-Mark DM50.995 +0.005 4.17
Dutch Guilder Fls50.525 +0.005 4.59
French Franc FFr164.73 +0.055 11.47
Italian Lire L37,243 +15.0 15.09
Jap Yen Y6,306.22 +0.990 5.62
Singapore $ S$64.135 +0.015 8.35
£ Sterling £14.448 +0.004 8.76
Swiss Franc SwFr46.021 +0.003 2.65
U.S. $ $29.595 +0.010 8.91
Daily dealings.
For other Rothschild Offshore Funds see Offshore and Overseas section.

Schroder Mngt Services (Jersey) Ltd
PO Box 195, St Helier, Jersey. 0534 27561
Schroder Money Funds Ltd
Sterling £14.0995 .... —
U.S. Dollar $26.3885 .... —
D-Mark DM51.3160 .... —
Swiss Franc SF1.0157 .... —

J. Henry Schroder Wagg and Co Ltd
120 Cheapside EC2. 01-382 6000
Naess&ThSept12 $60.36 −0.37 —

Target Trust Mgrs (Jersey) Ltd
PO Box 194, St Helier, Jersey. 0534 27441
Mgd Cur Fd 95.5 100.7 —

Tyndall-Guardian Management Ltd
PO Box 1256, Hamilton, Bermuda.
T-G Am $23.51 .... —
T-G Money $21.47 .... —
T-G £ Bond $15.39 .... —
T-G Com $20.47 .... —
T-G Mort C$19.86 .... —
T-G O'seas $12.57 .... —
T-G Pacific Y2 083 .... —
T-G Wall St $26.20 .... —

United Fund Managers Ltd
16-18 Queens Road Central, Hong Kong. 5-231417
S&MlyT $10.13 10.49 .... —

Insurances—continued

Albany Life Assurance Co Ltd
3 Darkes Lane, Potters Bar. 0707-42311
Pension Funds
EqPenFdAc 585.7 616.5 −3.1 —
Fix I PenAc 404.2 425.4 +0.6 —
GtMnPnAc 245.1 258.0 +0.1 —
Intl Man 244.4 257.2 −1.7 —
Jap Pens Fd 110.1 115.8 −1.4 —
AmPrDdAc 135.9 143.0 −0.7 —
Prop Pn Ac 224.3 236.1 +0.1 —
MpInPnAc 494.7 520.7 −2.0 —

Commercial Union Group
St Helens, 1 Undershaft, EC3. 01-283 7500
VarAnUtsSep2 — 145.46 −2.37 —
VarAnUtsSep9 — 32.79 .... —
Prime Series
Managed 119.8 126.2 −0.5 —
UK Equity 120.4 126.8 −0.4 —
Int Equity 117.7 123.9 −1.1 —
Property 101.6 107.0 .... —
Fixed In 106.6 112.3 +0.2 —
Index Lkd Gt 89.3 94.0 +0.4 —
Cash 98.5 103.7 .... —
Hand-in-Hand
Cash 120.3 126.7 .... —
Fixed Int 137.4 144.7 .... —
Property 140.2 147.6 .... —
NatWest 182.5 192.2 .... —

Continental Life Insurance PLC
64-70 High St, Croydon CR0 9XN. 01-680 5225
Equity Acc 150.5 158.5 +3.8 —
Prop Acc 139.5 146.9 +4.0 —
Int Acc 143.0 150.6 −2.4 —
Managd Acc 148.3 150.4 −2.1 —
PenEqtyAcc 174.8 181.1 −0.9 —
PenPropAcc 152.4 160.5 +4.3 —
PenIntlAcc 137.3 144.6 −0.4 —
PensMgAcc 153.7 161.8 +1.5 —
Gilt, Deposit, Index Fund prices available on request.

Crown Life
Crown Life House, Woking GU21 1XW. 04862 5033
PECorontFd 176.5 185.7 .... —
BrewinEqFd 238.0 250.5 .... —
StratInvFd 139.2 146.5 .... —
PenMnyAcc 123.5 129.9 .... —
PenMnyInt 113.9 119.8 .... —
Sage Fd 116.4 122.5 .... —
Heritage Fd 131.2 138.1 .... —
DBS Mangd 129.7 136.5 .... —

Friends' Provident Life Office
Pixham End, Dorking. (0306) 885055
Life Funds
Cash Accum 96.5 101.5 .... —
UK Eqty Ac 102.6 108.1 −0.3 —
FxdIntAc 98.4 103.6 +0.3 —
IndxLkdAcc 92.4 97.3 +0.3 —
Mixed Acc 100.0 105.3 −0.2 —
O'seasEqFd 100.9 106.3 +0.5 —
Propty Acc 96.1 101.2 .... —
Pension Funds
Cash 96.8 101.8 +0.1 —
Cash Acc 98.0 103.2 +0.1 —
UK Eq Cap 100.7 106.1 −0.5 —
UK Eqty Ac 102.6 107.4 −0.5 —
Fxd Int Cpty 97.3 102.5 +0.3 —
Fxd Int Acc 98.5 103.7 +0.3 —
Indx Lkd Cptl 90.9 95.7 +0.2 —
Indx Lkd Acc 92.0 96.9 +0.2 —
Mixed Captl 98.8 104.1 −0.2 —
Mixed Acc 100.1 105.4 −0.2 —
O'seasEqCap 102.7 108.2 −0.8 —
O'seasEqAc 104.1 109.6 −0.8 —
Propty Captl 94.8 99.8 .... —
Property Acc 95.9 101.0 .... —

Guardian Royal Exchange
Royal Exchange, EC3. 01-283 7107
GRE Pensions Management Ltd
PensProInt 129.5 136.3 .... —
PensPrpAcc 140.1 147.5 .... —
PensIxLkGInt 93.3 98.2 +0.3 —
PensIxLkGAc 94.1 99.0 +0.3 —
PensDepInt 135.3 141.5 .... —
PensDepAcc 147.6 155.6 .... —

Henderson Administration
26 Finsbury Sq, London EC2. 01-638 5757
High Inc 140.6 148.0 −0.5 —
Gilt Edged 97.5 102.7 +0.4 —
Cap Growth 142.0 149.5 −1.9 —
Technology 161.3 178.3 −1.9 —
Nat Res'ces 138.5 145.8 −2.2 —
Spec Sits 188.6 198.6 −2.0 —
N America 222.1 233.8 −2.0 —
Far East 176.3 185.6 −2.8 —
Property 116.0 122.0 +2.0 —
Managed 184.3 191.1 −0.8 —
Deposit 117.0 123.2 +0.1 —
Prime Rest 116.5 122.7 .... —
Pension Funds
UK Equity 101.4 106.8 −1.6 —
Fixed Int 108.6 114.4 +0.5 —
Spec Sits 121.5 127.9 −1.6 —
N America 111.5 117.8 −1.1 —
Far East 120.5 126.9 −2.2 —
Managed 111.4 117.3 −1.5 —
Comm Prop 100.1 105.4 +0.1 —
Prime Rest 102.7 108.2 +2.0 —
Deposit 100.1 105.4 +0.1 —
Capital unit prices available on request.

London Life Linked Assn Ltd
100 Temple St Bristol BS1 6EA. 0272 279179
Equity 225.3 232.0 .... —
Fixed Int 162.6 163.4 .... —
Property 165.2 170.1 .... —
Deposit 141.5 141.5 .... —
Mixed 190.6 194.7 .... —
Index Stk 107.5 108.0 .... —
International 115.2 117.5 .... —
London Life Managed Funds Ltd
Equity(P) 161.0 166.6 .... —
Fixed Int(P) 167.4 168.6 .... —
Property(P) 119.3 123.6 .... —
Deposit(P) 121.0 121.0 .... —
Mixed(P) 150.6 154.2 .... —
Index Stk 113.7 114.5 .... —
Intl Equity 111.0 113.2 .... —

Moneywise Friendly Society
80 Holdenhurst Rd, Bournemouth. 0202 295678
MoneywiseInt 47.8 50.9 .... —

Municipal Life Assurance Ltd
99 Sandling Rd Maidstone. 0622 679351
Equity Fd 95.0 101.0 .... —
Managed Fd 101.0 107.0 .... —

Premium Life Assurance Co Ltd
Eastchester House, Haywards Heath. 0444 458721
Nat Res'ces 118.0 125.0 −1.0 —
Property 139.0 147.0 .... —
UK Equity 139.0 147.0 −2.0 —
Intl Equity 123.0 130.0 −2.0 —

Prudential Pensions Ltd
Holborn Bars, EC1 2NH. 01-405 9222
Pru-Link Retirement Plan
Managed Fd 143.0 149.0 .... —
Cash Fund 112.5 117.2 .... —

St George Assurance Co Ltd
The Priory, Hitchin, Herts. 0462 57161
Managed Fd 102.1 107.5 .... —
Universal Fd 101.5 107.0 .... —

Save & Prosper Group
4 Gt St Helens, London EC3P 3EP. 0708-66966
Gilt Pen Fd 182.5 193.2 +0.1 —
Dep Pen Fd‡ 185.6 196.5 .... —
GlobalEqPen 55.6 58.9 −0.4 —

Skandia Life Assurance Co Ltd
Frobisher Hse, Southampton. 0703-334411
Managed 152.2 160.2 −0.7 —
Equity 160.6 169.1 −1.5 —
Internationl 178.3 187.7 −1.8 —
N America 108.7 114.4 −0.9 —
N European 101.7 107.1 −1.1 —
Pacific 109.1 114.8 −1.5 —
IntRecovery 111.0 116.8 −0.8 —
Gilt Plus 139.9 147.3 +0.7 —
Property 128.3 135.1 +0.1 —
Deposit 131.0 137.9 .... —
Pens Mangd 181.5 191.0 −1.0 —
Pens Equity 188.7 198.6 −2.0 —
Pens Intl 215.1 226.4 −2.3 —
Pens N Am 111.1 116.9 −1.1 —
Pens N Euro 103.8 109.3 −1.0 —
PensPacific 111.3 117.2 −1.7 —
PensIntRec 113.1 119.0 −1.0 —
PensGtPls 167.5 176.3 +1.2 —
Pens Prpty 156.0 164.2 +0.2 —
Pens Dep 159.8 168.2 +0.1 —
For prices of Capital Units and Guaranteed Basic Rates please phone 0703 334411

Target Life Assurance Co Ltd
Target House, Gatehouse Road, Aylesbury, Bucks. Aylesbury (0295) 5941
Sterling — — 6.5
U.S. Dollar — — 5.7
Swiss Francs — — 0.4
Deutsche Mark — — 2.7
Yen — — 3.7

TSB Life Ltd
PO Box 3, Keens House, Andover, Hants SP10 1PG.
Managed Fd 103.7 109.3 +0.2 —
Property Fd 97.3 102.5 .... —
Fixed Int Fd 99.2 104.5 +0.4 —
Money Fd 97.5 102.8 +0.1 —
Equity Fd 110.4 116.3 +0.1 —

Windsor Life Assurance Co Ltd
Royal Albert Hse, Sheet St, Windsor 68144
N Amer Fd 209.8 220.8 .... —
Far East Fd 127.1 133.8 .... —
FutAssGth 77.0(A) 85.0(B) .... —
Ret Assd Pen 52.36 .... —

AUTHORISED UNIT TRUSTS

Abbey Unit Tst. Mngrs. (a)
1-3 St Paul's Churchyard EC4P 4DX 01-236 1833
High Income
Gilts & Fixed Int. 112.8 119.4xd +0.4 10.05
High Inc Equity 50.4 54.2 −1.2 6.72
Capital Growth
American Growth 101.8 109.5 −1.2 1.78
Assets & Engs. Tt. 51.7 55.9 −0.5 3.29
Commodity & Engy. 79.4 85.4xd −1.3 2.42
General 83.9 90.7 −0.9 3.09
Japan 98.7 106.1 −1.9 0.19
UK Growth 51.0 55.4 −0.6 3.61
Acc. Units 69.8 75.9 −0.7 3.61
Worldwide Bond 129.3 139.0 −0.3 3.96
Equitas Prog. 119.8 129.5 −1.1 3.32

Aitken Hume
1, Worship St., EC2 01-628 6626
American Tech Fd. 159.8 171.7xd −1.0 0.10
Inc & Gwth Fd. 31.7 34.1 −0.2 5.70
Pacific Fd. 120.6 130.2 −2.3 1.20
Secure Income Fd 104.1 112.2 −0.9 0.00
Special Sits. 145.6 156.5 −0.9 1.00
Energy Fd. 219.6 236.0 −3.0 1.32
Exempt Fd. 376.5 404.9 .... —
Small Co's Fd. 267.0 287.0 −2.4 2.00
Jap. Technology 47.7 50.8 −0.4 0.50
Aitken Hume Ltd. Deposit Rates.
Treasury Acct* — — 9.44
Mnthly Income Acct* — — 9.38
*Not Authorised U.T.—Bank Deposit.

Allied Hambro Ltd. (a) (g)
Hambro Hse., Hutton, Brentwood, Essex
Brentwood (0277) 211459 & 229123
Balanced Funds
Allied 1st 116.4 124.5 −0.9 4.60
Brit. Inds. Fund 107.4 114.9 −0.7 4.75

Britannia Gp. of Unit Trusts Ltd. (a)(c)(g)
Salisbury House, 31, Finsbury Circus, London EC2
01-638 0478/0479 or 01-588 2777
Britannia Viewpoint 01-673 0048
UK Specialist Funds
Assets 153.1 165.1 −0.5 3.43
Recovery 59.5 64.2 −0.5 2.98
Smaller Cos 86.8 93.6xd −0.4 1.78
Spec. Mkt. Sits. 73.6 79.4 −0.5 1.48
UK Blue Chip 49.8 53.7 −0.4 3.22
High Income Funds
Nat. High Inc. 101.2 109.1xd −0.7 6.87
Extra Inc. 41.5 44.7 −0.2 8.76
Inc & Growth 108.8 117.3 −0.7 5.89
Gilt 26.7 28.1 +0.1 9.32
Pref. Shares 16.9 18.2xd 11.79
Sector Specialist Funds
Commodity Shares 152.1 164.0 −1.8 1.36
Financial Secs. 142.1 153.2 −1.3 3.35
Gold & General 29.9 32.5 −0.5 2.77
Inv. Tst. Shares 90.6 97.7 −0.9 1.59
Prop. Shares 25.9 27.9xd −0.1 2.47
Univ. Energy 66.0 71.2 −0.7 0.96
World Tech 50.7 54.7xd −0.5 —
Overseas Funds
American Growth 66.5 71.7 −0.6 1.87
Am. Smaller Cos. 23.3 25.1 −0.2 0.20
Am. Spec. Sits 68.3 73.6 −0.4 1.30
Australian Growth 67.2 72.4xd −1.6 1.20
Far East 35.1 37.9 −0.1 1.41
Hong Kg. Perfrmnce 17.1 18.4 +0.3 3.63
Intl. Growth 102.5 110.5 −0.5 1.61
Japan Perf. Tst 27.5 29.7 −0.6 —
Japan Smlr Cos Tst — 10.0 .... —
General Funds
Capital Acc. 106.7 115.0 −0.9 2.97
Comm. & Ind. 81.0 87.3 −0.8 2.18
Domestic 69.3 74.7 −0.6 3.44
Growth 147.2 158.7 −1.4 1.33
Shield 74.6 80.4xd −0.7 2.25
Exempt Funds
Exempt 242.7 255.1 −0.9 4.57
Ex. Mkt. Ldrs 45.6 48.2 −0.1 3.83

FT UNIT TRUST INFORMATION SERVICE

Duncan Lawrie Fnd. Mgrs. (g)
1, Hobart Place, London SW1W 0HU. 01-245 9321
Growth 19.4 20.9 −0.1 3.6
Income 34.3 36.9 −0.2 9.4
Overseas 71.7 77.1 −0.5 3.08
For E. F. Winchester see Oppenheimer Practical Fund Management

Henderson Administration (a) (b) (c)
Premier UT Admin, 5 Rayleigh Rd, Hutton, Brntwd, Essex. 0277 217238
U.K. Funds
Special Sits. 71.6 77.0xd −0.2 1.36
(Accum. Units) 97.2 104.5xd −1.3 1.36

INSURANCE & OVERSEAS MANAGED FUNDS

Barclays Life Assur. Co. Ltd.—cont.

Income Accum.	112.8	118.8	-0.5	-
Do. Initial	109.8	115.6	-0.5	-
Man. Pens. Accum	241.5	254.3		-
Do Initial	200.3	210.9		-
Gilt-Edg Pens. Accum	207.1	218.0		-
Do Initial	165.3	174.0		-
Money Pens. Accum	185.3	195.1		-
Do Initial	149.9	157.8		-

Black Horse Life Ass. Co. Ltd.
71, Lombard St., EC3. 01-623 1288

Black Horse Man. Fd.		231.39	...	-
Managed Inv. Fd.	156.88	165.14	...	-
Property Fd.	150.30	158.22	...	-
Fixed Interest Fd.	141.61	149.07	...	-
Cash Fd.	135.42	142.55	...	-
Income Fd.	172.57	181.59	...	-
Extra Income Fd.	162.92	171.50	...	-
Worldwide Growth Fd.	229.60	241.69	...	-
Balanced Fd.	173.22	182.34	...	-
Smlr Co's & Recv. Fd.	207.34	218.26	...	-
Int. Technology Fd.	261.70	275.48	...	-
Nth. Amer. & Gen. Fd.	164.70	173.37	...	-
Energy Int. Fd.	107.92	113.60	...	-
Pacific Basin Fund	125.75	132.37	...	-

British National Life Assurance Co. Ltd.
Harlands Rd, Haywards Heath. 0444 414111

Managed	108.9	114.6	+0.6	-
Property	106.6	112.2	+0.4	-
Equity	95.2	100.2	-0.6	-
International	127.3	134.0	+0.4	-
Fixed Interest	99.7	105.0	+2.3	-
Deposit	98.8	104.0	+0.2	-
Managed Pen. Cap.	109.9	115.7	+0.5	-
Property Pens. Cap.	105.9	111.5	+0.3	-
Equity Pens. Cap.	91.2	96.0	-1.1	-
Intnl. Pens. Cap.	133.5	140.6	+0.4	-
Fixed Int. Pens. Cap.	97.9	103.0	+1.1	-
Deposit Pens. Cap.	97.0	102.1	...	-

Canada Life Group
2-6, High St., Potters Bar, Herts. P. Bar 51122

Equity Gth Aug 30		96.2	...	-
Retmt. Fed. Aug 6		255.8	...	-
Managed Pen Fund	175.5	184.7	...	-
Property Pen Fund	113.8	119.8	...	-
Index Lnkd Pen Fund	110.5	116.3	...	-

G.T. Management Ltd.
16 Finsbury Circus, Lond EC2M 7DJ 01-628 8131

G.T. Plan Bond Fund	118.4	124.7	-0.4	
GT Pln High Yld Fnd	117.0	123.2	-0.4	
GT Plan Far East Fnd	111.4	117.3	-2.5	-
GT Pln N Am Fund	143.3	150.9	-1.8	-
GT Pln UK&G.E. Fnd	130.9	137.8	-2.0	-
GT Pln Wrldwide Fnd	133.6	140.7	-3.0	-
GT Pension Bnd Fnd	127.9	134.7	-0.4	-
GT Pen High Yld Fd	133.4	140.5	-0.9	-
GT Pen Far East Fd	134.9	142.1	-3.7	-
GT Pen N. Am Fd	210.3	221.4	-2.9	-
GT Pen UK & G.E. Fd	152.1	160.2	-2.2	-
GT Pen Worldwide Fd	142.6	150.2	-3.4	-

Assicurazioni GENERALI S.p.A.
117, Fenchurch St., EC3M 5DY. 01-488 0733

Intl. Managed Bond	164.2	172.9	...	-

General Portfolio Life Ins. C. Ltd.
Crossbrook St., Cheshunt, Herts. Waltham X 31971

Portfolio Fd. Acc.		248.5	+1.4	-
Portfolio Fd. Init		206.1	+0.5	-
Portfolio Fd. Cap.		236.6	...	-
Investment A/cs	247.0	260.1	...	-

Growth & Sec. Life Ass. Soc. Ltd.
48, London Fruit Exchange, E1 6EU 01-377 1122

Flexible Finance		1,526	...	-
Landbank Secs.		66.15	...	-
Landbank Secs. Acc.	185.6	190.4	...	-
G. & S. Super Fd.		£11.376	..	-

Guardian Royal Exchange
Royal Exchange, E.C.3. 01-283 7101

Guardian Assurance

Property Bonds	302.8	315.4	...	-

GRE Linked Assurance Limited

Managed Initial	206.8	217.6	-0.4	-
Do. Accum.	229.1	241.1	-0.4	-
Equity Initial	259.7	273.3	-0.1	-
Do. Accum.	287.7	302.8	-0.1	-
Fixed Int. Initial	191.0	201.1	+0.2	-
Do. Accum.	211.6	222.8	+0.2	-
International Initial	212.7	223.9	+0.2	-

[illegible]

Wardley Trust	$5.55	6.00		2.33
Wardley Nikko As. Fd.	$27.10	28.37		5.28
Wardley Bond Trust	$10.30	10.50		8.86
Wardley Japan Trust	$26.11	27.06		0.67

WestAvon Secs (Guernsey) Ltd
PO Box 214, St Peter Port, Guernsey 0481 27768

Gilt & Option Fd.	£1.10	1.16		-
US $ Option	$1.01	1.06		2.50

World Wide Growth Management®
10a, Boulevard Royal, Luxembourg

Worldwide Gth Fd		$13.14	-0.05	-

Inv. Adv.: M. & G. Inv. Mngt., Ltd., London

Wren Commodity Management Ltd.
10, St George's St., Douglas IoM 0624 25015

Wren Com. Fund	26.1	27.1		-
Chinese Fund	70.1	73.0	..	-
Precious Metal Fund	120.9	125.9		-
Vanguard Cmdy. Fd.	38.9	39.9		-
Financial Futures Fd.	78.8	82.0		-
Wren Intl. Fnd.*	$0.687	0.716		-

NOTES

Prices are in pence unless otherwise indicated and those designated $ with no prefix refer to U.S. dollars. Yields % (shown in last column) allow for all buying expenses. a Offered prices include all expenses. b Today's prices. c Yield based on offer price. d Estimated. g Today's opening price. h Distribution free of UK taxes. p Periodic premium insurance plans. s Single premium insurance. x Offered price includes all expenses except agent's commission. y Offered price includes all expenses if bought through managers. Z Previous day's price. § Guernsey gross. # Suspended. ♦ Yield before Jersey tax. † Ex-subdivision. ‡‡ Only available to charitable bodies. § Yield column shows annualised rate of NAV increase.

FT LONDON SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
22May	22N	Exch. 13¼pc '83	100[illegible]	15.4	13.42	9.50
12Jun	12D	Exch. 10pc 1983	100[illegible]	6.5	9.99	9.43
15Jul	15Ja	Funding 5½pc '82-84‡‡	99[illegible]	8.6	5.55	7.98
20Aug	20F	Exch. 11¼pc 1984	100[illegible]	14.7	11.17	9.21
22N	22May	Exchequer 14pc 1984	102[illegible]	15.4	13.66	9.81
19D	19Jun	Exch. 3pc 1984	95⅝	13.5	3.14	9.12
26Mar	26S	Treasury 12pc 1984	102xd	22.8	11.76	9.87
22Aug	22F	Treasury 15pc 1985	105[illegible]	18.7	14.16	10.32
22S	22Mar	Exch. 12pc Cnv. '85	102[illegible]xd	16.8	11.72	10.23
21N	21My	Treasury 3pc 1985	92⅝	14.4	3.25	7.94
15Jan	15Jul	Treasury 11½pc 1985	101[illegible]	8.6	11.30	10.33
3 Mar	3 Sept	Treas 8¾pc Cnv '85	98¼	28.7	8.91	9.73
22May	22N	Exch. 12¼pc 1985	102[illegible]	15.4	11.91	10.63
25 Aug.	25F	Exch. 11¾pc '86	101[illegible]	19.7	11.53	10.79
—		Tr. 10pc Cnv '86 (£40pd)	42⅝	—	10.01	10.02
19N	19May	Treasury 3pc 1986	87⅛	12.4	3.43	8.36
19 Nv	19 My	Exch. 10½pc Cv '86	99[illegible]	—	10.56	10.72
12D	12Jun	Treasury 12pc '86	102[illegible]	6.5	11.75	11.00
10Ja	10Jul	Treasury 8¾pc '84-86‡‡	95⅝	3.6	8.91	10.41
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Five to Fifteen Years

[illegible]

Over Fifteen Years

[illegible]

Undated

[illegible]

Index-Linked

[illegible]

INT. BANK AND O'SEAS GOVT. STERLING ISSUES

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH AND AFRICAN LOANS

[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1Ja	1J	N.Z. 7¼pc 1988-92	78¼xd	16	9.42	11.45
15D	15J	Do 7½pc '83-86	91xd	16.5	8.40	12.13
—		S. Rhod. 2½pc Non-Ass.	181	—	—	—
10Mar	10Sept	Do 3½pc 80-85 Assd	82	10.2	4.35	14.80
7F	7A	Do. 4½pc 87-92 Assd.	54	7.1	8.36	13.98
15O	15A	Zimbabwe Ann (£100pd)	346xd	15.3	—	14.16

LOANS

Public Board and Ind.

1Ja	1J	Agric. Mt. 5pc '59-89	73½xd	16	6.89	11.58
1M	1S	Met. Wtr. 3pc 'B'	35	12	8.57	11.20

LOANS—continued

Financial

[illegible]

Building Societies

[illegible]

FOREIGN BONDS & RAILS

[illegible]

AMERICANS

[illegible]

CANADIANS

[illegible]

BANKS, H.P. & LEASING

[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
May	Nov	Clive Dis'nt 20p	38	18.10	3.2	—	12.7	—
	May	Com'zbk DM 10	835	6.5	—	—	—	—
	March	C'hgn.Hbk. Kr100	£18½	21.3	v015%	—	8.7	—
Jan.	Apr	Dawes (G. R.)	7	25.1	—	—	—	—
	May	Deutsche Bank DM50	£75¼	9.5	v22%	—	3.6	—
May	Dec	English Assoc.	155	15.8	3.0	3.8	2.8	13.5
June	Nov.	First Nat. 10p	51½	9.74	—	—	—	4.1
3		Do. Wrts. 75-83	2¼	—	—	—	—	—
June	Dec.	Gerrard Natnl	215	9.5	h10.0	—	6.6	—
	April	Goode D't Mry.5p	53	21.2	1.0	—	2.7	—
Nov.	April	Grindlays	128	15.8	4.38	3.0	4.9	9.8
Mar	Nov.	Guinness Peat	47	28.9	8—	—	—	—
Dec.	July	Hambros 5p	123	4.7	5.28	—	6.1	—
Dec.	July	Hill Samuel	253	20.6	9.1	—	5.1	—
Oct	May	Hong Shng. $2.50	61xd	9.7	†055c	—	8.0	—

BANKS—Continued

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING INDUSTRY, TIMBER AND ROADS

[illegible]

CHEMICALS, PLASTICS

[illegible]

CHEMICALS, PLASTICS—Cont.

[illegible]

DRAPERY AND STORES

[illegible]

ELECTRICALS

[illegible]

ELECTRICALS—Continued

[illegible]

ENGINEERING MACHINE TOOLS

[illegible]

FOOD, GROCERIES, ETC.

[illegible]

FOOD, GROCERIES—Cont.

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS—Continued

[illegible]

INSURANCES

[illegible]

LEISURE

[illegible]

LEISURE—Continued

[illegible]

MOTORS, AIRCRAFT TRADES

Motors and Cycles

[illegible]

Commercial Vehicles

[illegible]

Components

[illegible]

Garages and Distributors

[illegible]

NEWSPAPERS, PUBLISHERS

[illegible]

PAPER, PRINTING ADVERTISING

[illegible]

PROPERTY

[illegible]

PROPERTY—Continued

[illegible]

SHIPPING

[illegible]

SHOES AND LEATHER

[illegible]

SOUTH AFRICANS

[illegible]

TEXTILES

[illegible]

TOBACCOS

[illegible]

TRUSTS, FINANCE, LAND

Investment Trusts

[illegible]

INVESTMENT TRUSTS-Cont.

[illegible]

Finance, Land etc.

[illegible]

OIL AND GAS

[illegible]

OIL AND GAS—Continued

[illegible]

OVERSEAS TRADERS

[illegible]

PLANTATIONS

Rubbers, Palm Oil

[illegible]

Teas

[illegible]

MINES

Central Rand

[illegible]

Eastern Rand

[illegible]

Far West Rand

[illegible]

O.F.S.

[illegible]

Finance

[illegible]

Diamond and Platinum

[illegible]

Central African

[illegible]

MINES—continued

Australians

[illegible]

Tins

[illegible]

Miscellaneous

Dividends Paid	Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
—	Admiral Mines	55	—	—	—	—
—	♥Anglo-Dominion	78	—	—	—	—
—	♥Anglo Utd. Dev.	70	—	—	—	—
—	♥Colby Res. Corp	140	—	—	—	—
Aug Feb	Cons. Murch. 10c	530	4 7	‡060c	1 9	‡
Sept Feb	Hampton Areas 10p	226	18 7	3 75	2 1	2 2
—	♥Highwood Res.	210	—	—	—	—
—	Homestake Mining $1	£22¼	3 8	Q20c	—	0 6
—	Northgate C$1	385	9 77	—	—	—
Jan. July	R T Z.	630	9 5	17 0	1 9	3 9
Jan July	Do 9⅞% Cnv Ln '95-2000	£137½	9 5	Q9⅞%	21.4	7.0
—	♥Sabina Inds C$1	115	—	—	—	—
	For Southwest Res see Oil & Gas					
—	♥Tara Expln $1	680	—	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price-earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable, bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap" Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax free to non-residents on application.
- ● Figures or report awaited.
- ♥ Not officially UK listed, dealings permitted under Rule 163(4)(a).
- ◇ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Dealt in under Rule 163(3).
- ∮ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- ◆ Merger bid or reorganisation in progress.
- ♣ Not comparable.
- ♠ Same interim; reduced final and/or reduced earnings indicated.
- § Forecast dividend, cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ¶ No par value.

B.Fr. Belgian Francs. Fr. French Francs. ‡‡ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1983-84. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1984. K Figures based on prospectus or other official estimates for 1982-83. M Dividend and yield based on prospectus or other official estimates for 1983. N Dividend and yield based on prospectus or other official estimates for 1982-83. P Figures based on prospectus or other official estimates for 1982. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL AND IRISH STOCKS

The following is a selection of regional and Irish stocks, the latter being quoted in Irish currency

			IRISH		
			Nat. 9¾% 84-89	£87¼	
			Fin 13% 97/02	£95¼	-¼
Albany Inv 20p	61	-2	Alliance Gas	88	
Bdg'wtr. Est 50p	275		Arnott	205	
Craig & Rose £1	£10½		Carroll (P.J.)	109	
Finlay Pkg. 5p	30		Concrete Prods.	72xd	
Graig Ship. £1	22		Heiton (Hldgs.)	26	
Higsons Brew	87		Irish Ropes	33	
Holt (Jos.) 25p	910		Jacob	81	
[illegible]			[illegible]		

OPTIONS

3-month Call Rates

[illegible]

"Recent Issues" and "Rights" Page 18

CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

Rushing around to little avail

BY COLIN MILLHAM

The dollar spent most of last week nervously rushing around in order to go nowhere. It began with financial markets so surprised by the Federal Reserve's announcement of a $2bn fall in M1 money supply that certain accusations were made about unreliable figures, and although the Fed strenuously denied any error confidence was never completely restored.

Initial reaction to the M1 figure was to mark the dollar down, particularly since all the money supply numbers, including the more broadly based M2 and M3, were now within target range. But no downward trend seems to last long, and probably the only way to calm the exchanges would be for a change in U.S. law allowing the Fed to stop issuing weekly M1 figures, since this particular piece of news only produces reflex reactions, and does not allow too much consideration of more fundamental factors, which will eventually weaken the dollar.

The key word is eventually, however, because one of these fundamental factors is the very large current account deficit. Although this was a record $9.7bn in the second quarter, leading to suggestions of a possible deficit for the full year of around $30bn, the dollar hardly reacted to the announcement on Thursday, as traders became increasingly nervous that earlier predictions of a September money supply bulge were about to come true. Forecasts of last Friday's figure ranged up to an increase of $10bn and against this background the quarterly current account was virtually ignored.

One reason behind the steady demand for the dollar may have been the Treasury refunding programme. A total of $8bn in two-year notes was offered on Wednesday, while this week's Treasury package adds up to $14.25bn.

Other important statistics published last week included a fall of 1.4 per cent in U.S. August retail sales, which tended to dispell fears of an overheating in the economy. The following rise of only 0.9 per cent in August industrial production, compared with 1.8 per cent in July, was also looked on as reasonably good for a healthy and controlled economic recovery, without too much likelihood of action from the Federal Reserve to pull in the reins with higher interest rates. But the almost hysterical mood of the market was illustrated by a softening of the dollar late Friday as money supply predictions came down.

FORWARD RATES AGAINST STERLING

	Spot	1 month	3 month	6 month	12 month
Dollar	1.5015	1.5020	1.5027	1.5051	1.5092
D-Mark	4.01	3.9970	3.9712	3.9386	3.8708
French Franc	12.09	12.1210	12.2433	12.4783	12.8448
Swiss Franc	3.26	3.2457	3.2182	3.1796	3.0997
Japanese Yen	366.5	365.7	364.0	361.4	355.7

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU September 16	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	44.9008	45.8885	+2.20	+1.42	±1.5447
Danish Krone	8.14104	8.15947	+0.23	−0.55	±1.6425
German D-Mark	2.24184	2.27403	+1.44	+0.66	±1.0642
French Franc	6.87456	6.87095	−0.05	−0.83	±1.4052
Dutch Guilder	2.52595	2.54252	+0.66	−0.12	±1.4984
Irish Punt	0.72569	0.725208	−0.07	−0.85	±1.6699
Italian Lira	1403.49	1361.19	−3.01	−3.01	±4.1506

Changes are for ECU, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

BANK OF ENGLAND TREASURY BILL TENDER

	Sept. 16	Sept. 2		Sept. 16	Sept. 2
Bills on offer	£100m	£100m	Top accepted rate of discount	9.2453%	9.3456%
Total of applications	£478.75m	£416.54m	Average rate of discount	9.2098%	9.3343%
Total allocated	£100m	£100m	Average yield	9.43%	9.56%
Minimum accepted bid	£97.69½%	£97.67	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	56%	21%			

OTHER CURRENCIES

Sept. 16	£	$		£ Note Rates
Argentina Peso	18.05-18.26	12.109-12.129	Austria	28.00-28.30
Australia Dollar	1.6905-1.6925	1.1280-1.1285	Belgium	82¼-83¼
Brazil Cruzeiro	1,046-1,051	698.0-701.0	Denmark	14.33-14.47
Finland Markka	8.5620-8.5885	5.7160-5.7180	France	12.05-12.17
Greek Drachma	138.65-139.25	92.40-92.70	Germany	3.99-4.03
Hong Kong Dollar	11.85-11.94	7.91-7.96	Italy	2365-2415
Iran Rial	131.00*	87.90*	Japan	366-370
Kuwait Dinar (KD)	0.4370-0.4375	0.29185-0.29188	Netherlands	4.46-4.51
Luxembourg Fr.	80.90-81.00	53.92-53.94	Norway	11.07-11.18
Malaysia Dollar	3.5200-3.5280	2.3490-2.3510	Portugal	183¾-205
New Zealand Dlr.	2.2945-2.2995	1.5305-1.5350	Spain	220-235
Saudi Arab. Riyal	5.2103-5.2200	3.4790-3.4810	Sweden	11.77-11.88
Singapore Dollar	3.2030-3.2090	2.1380-2.1400	Switzerland	3.24-3.28
Sth. African Rand	1.6680-1.6705	1.1115-1.1125	United States	1.48-1.51
U.A.E. Dirham	5.5000-5.5090	3.6710-3.6735	Yugoslavia	175-185

* Selling rates.

CURRENCY MOVEMENTS

Sept. 16	Bank of England Index	Morgan Guaranty Change %
Sterling	84.9	−6.1
U.S. dollar	128.7	+16.9
Canadian dollar	92.6	+1.2
Austrian schilling	116.4	+6.2
Belgian franc	90.8	−11.3
Danish kroner	79.9	−6.2
Deutsche mark	125.8	+6.9
Swiss franc	150.7	+12.3
Guilder	116.6	+4.4
French franc	67.6	−14.4
Lira	50.2	−10.9
Yen	147.5	+6.6

Morgan Guaranty changes: average 1980-1982=100. Bank of England index (base average 1975=100).

CURRENCY RATES

SEPT. 16	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	—	0.700354	0.567008
U.S. $	8½	1.04962	0.849944
Canadian $	9.50	*	1.04841
Austria Sch	3¾	19.7318	15.9705
Belgian F	9	56.6375	45.8885
Danish Kr.	7½	10.0753	8.15947
D mark	4	2.80679	2.27403
Guilder	5	3.13836	2.54252
French F.	9½	8.48355	6.87095
Lira	17	1680.44	1361.19
Yen	5½	256.787	207.064
Norwgn Kr	8	7.79868	6.31254
Spanish Pta	—	159.805	129.447
Swedish Kr	8½	8.27783	6.69119
Swiss Fr	4	2.28103	1.84710
Greek Dr'ch	20½	97.5622	79.0023

*C$/SDR rate for Sept 15: 1.29275

THE POUND SPOT AND FORWARD

Sept 16	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.4960-1.5030	1.5010-1.5020	0.02-0.07c dis	−0.36	0.13-0.18dis	−0.41
Canada	1.8450-1.8530	1.8515-1.8525	0.10c pm-par	0.32	0.18-0.08 pm	0.28
Nethlnd.	4.47-4.49½	4.48-4.49	1½-1c pm	3.34	3⅞-3⅝ pm	3.23
Belgium	80.65-81.10	80.90-81.00	3c pm-7 dis	−0.30	8-18 dis	−0.64
Denmark	14.35-14.41	14.39-14.40	3.40-4.45ore dis	−3.27	4.45-5.60dis	−1.40
Ireland	1.2760-1.2810	1.2775-1.2785	0.18-0.21p dis	−1.83	0.55-0.60dis	−1.80
W. Ger.	3.99½-4.02½	4.00½-4.01½	1½-1pf pm	3.74	4-3½ pm	3.74
Portugal	185.75-187.25	186.50-187.00	160-425c dis	−18.79	680-1220dis	−20.35
Spain	227.75-229.00	228.50-228.80	280-370c dis	−17.05	950-1120dis	−18.10
Italy	2,395-2,401	2,397½-2,399½	14½-16½ lire dis	−7.75	47-50 dis	−8.09
Norway	11.10-11.14	11.13-11.14	3.40-4.10ore dis	−4.04	10.15-10.95d	−3.79
France	12.08-12.12	12.08½-12.09½	2¾-3¼c dis	−3.22	14½-16 dis	−5.04
Sweden	11.77-11.82	11.80½-11.81½	2.35-2.90ore dis	−2.67	5.85-6.45dis	−2.08
Japan	364½-367½	366-367	0.90-0.70y pm	2.62	2.60-2.40 pm	2.73
Austria	28.10-28.25	28.18-28.23	9¼-8gro pm	3.67	25½-22 pm	3.37
Switz.	3.24½-3.27	3.25½-3.26½	1¾-1¼c pm	5.52	4⅞-3⅞ pm	5.06

Belgian rate is for convertible francs. Financial franc 82.50-82.60. Six-month forward dollar 0.33-0.38c dis, 12-month 0.72-0.82c dis.

THE DOLLAR SPOT AND FORWARD

Sept 16	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.4960-1.5030	1.5010-1.5020	0.02-0.07c dis	−0.36	0.13-0.18dis	−0.41
Ireland†	1.1700-1.1760	1.1750-1.1760	0.28-0.24c pm	2.66	0.77-0.67 pm	2.46
Canada	1.2330-1.2345	1.2335-1.2340	0.09-0.06c pm	0.73	0.23-0.20 pm	0.70
Nethlnd.	2.9810-2.9925	2.9840-2.9860	0.98-0.88c pm	3.73	2.77-2.67 pm	3.64
Belgium	53.92-54.02	53.92-53.94	2c pm-1 dis	0.11	par-4 dis	−0.15
Denmark	9.5925-9.6075	9.5925-9.5975	1½-2ore dis	−2.19	1½-2 dis	−0.73
W. Ger.	2.6675-2.6770	2.6680-2.6690	0.96-0.91pf pm	4.19	2.85-2.80 pm	4.22
Portugal	124.00-124.70	124.30-124.60	110-280c dis	−18.80	450-800dis	−20.09
Spain	152.15-152.55	152.25-152.35	185-215c dis	−15.74	625-725dis	−17.71
Italy	1,598-1,602	1,598-1,599	9½-10 lire dis	−7.31	30¾-31¾dis	−7.81
Norway	7.4200-7.4300	7.4200-7.4250	1.70-2.00ore dis	−2.99	5.65-5.95dis	−3.12
France	8.0525-8.0875	8.0550-8.0600	1.80-2.00c dis	−2.82	9.40-9.80dis	−4.75
Sweden	7.8650-7.8850	7.8700-7.8750	0.95-1.15ore dis	−1.60	2.70-2.90dis	−1.42
Japan	243.35-244.50	243.50-243.60	0.63-0.58y pm	2.98	1.92-1.84 pm	3.08
Austria	18.77½-18.81	18.77½-18.78½	6.70-6.10gro pm	4.08	19.25-17.25pm	3.88
Switz.	2.1650-2.1775	2.1660-2.1670*	1.05-1.00c pm	5.67	3.06-3.01 pm	5.59

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 54.95-55.00.
* Sept 15: The closing rate should have read 2.1760-2.1770.

EXCHANGE CROSS RATES

Sept. 16	Pound St'rling	U.S. Dollar	Deutschem'k	Japanese Yen	French Franc	Swiss Franc	Dutch Guild	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1	1.502	4.010	366.5	12.09	3.260	4.485	2399.	1.852	80.95
U.S. Dollar	0.666	1.	2.671	244.1	8.052	2.171	2.987	1597.	1.233	53.91
Deutschemark	0.249	0.374	1.	91.40	3.015	0.813	1.118	598.1	0.462	20.19
Japanese Yen 1,000	2.729	4.097	10.94	1000.	32.99	8.895	12.24	6544.	5.053	220.9
French Franc 10	0.827	1.242	3.317	303.1	10.	2.696	3.710	1984.	1.532	66.96
Swiss Franc	0.307	0.461	1.230	112.4	3.709	1.	1.376	735.7	0.568	24.83
Dutch Guilder	0.223	0.335	0.894	81.72	2.696	0.727	1.	534.8	0.413	18.05
Italian Lira 1,000	0.417	0.626	1.672	152.8	5.041	1.359	1.870	1000.	0.772	33.75
Canadian Dollar	0.540	0.811	2.165	197.9	6.528	1.760	2.422	1295.	1.	43.71
Belgian Franc 100	1.235	1.855	4.954	452.7	14.94	4.027	5.540	2963.	2.288	100.

FINANCIAL FUTURES

LONDON

THREE-MONTH EURODOLLAR $1m points of 100%

	Close	High	Low	Prev
Dec	89.78	89.78	89.67	89.69
March	89.46	89.48	89.39	89.40
June	89.27	89.28	89.24	89.20
Sept	89.09	89.09	89.04	89.00
Dec	88.94	—	—	88.85

Volume 1,438 (1,792).
Previous day's open int 5,217 (5,099).

THREE-MONTH STERLING DEPOSIT £250,000 points of 100%

	Close	High	Low	Prev
Dec	90.35	90.39	90.27	90.28
March	90.06	90.10	89.99	89.97
June	89.81	89.81	89.75	89.68
Sept	89.58	—	—	89.45
Dec	89.43	—	—	89.30

Volume 745 (215).
Previous day's open int 3,762 (3,700).

20-YEAR 12% NOTIONAL GILT £50,000 32nds of 100%

	Close	High	Low	Prev
Sept	104-13	104-13	104-04	104-03
Dec	106-30	106-31	106-13	106-17
March	106-15	106-15	106-00	106-03
June	105-26	105-26	105-24	105-18
Sept	105-06	—	—	104-28

Volume 2,198 (1,534).
Previous day's open int 3,144 (4,000).
Basis quote (clean cash price of 15¼% Treasury 1998 less equivalent price of near futures contract) par-08 (32nds).

STERLING £25,000 $ per £

	Close	High	Low	Prev
Dec	1.5010	1.5010	1.4985	1.4944
March	1.5030	—	—	1.4965

Volume 120 (69).
Previous day's open int 743 (712).

DEUTSCHE MARKS DM 125,000 $ per DM

	Close	High	Low	Prev
Dec	0.3779	0.3779	0.3775	0.3767
March	0.3816	—	—	0.3805

Volume 30 (13).
Previous day's open int 401 (402).

SWISS FRANCS SwFr 125,000 $ per SwFr

	Close	High	Low	Prev
Dec	0.4661	0.4663	0.4659	0.4653
March	—	—	—	—

Volume 11 (12).
Previous day's open int 117 (118).

JAPANESE YEN Y12.5m $ per Y100

	Close	High	Low	Prev
Dec	0.4132	0.4136	0.4132	0.4119
March	0.4167	—	—	0.4153

Volume 20 (2).
Previous day's open int 149 (147).

CHICAGO

U.S. TREASURY BONDS (CBT) 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Sept	71-24	71-26	71-01	70-27
Dec	71-08	71-11	70-14	70-10
March	70-23	70-28	69-29	69-25
June	70-10	70-12	69-17	69-12
Sept	69-31	70-02	69-06	69-01
Dec	69-22	69-22	68-31	68-24
March	69-14	69-14	68-30	68-16
June	69-08	69-08	68-20	68-10
Sept	—	—	—	—
Dec	—	—	—	—
March	—	—	—	—

U.S. TREASURY BILLS (IMM) $1m points of 100%

	Close	High	Low	Prev
Sept	89.89	89.91	89.83	89.75
Dec	90.66	90.69	90.53	90.51
March	90.34	90.36	90.22	90.18
June	90.10	90.13	90.00	89.95
Sept	89.18	89.16	—	89.13
Dec	89.69	89.71	89.65	89.57
March	89.53	89.52	89.48	89.39
June	89.35	89.34	—	89.26

CERT. DEPOSIT (IMM) $1m points of 100%

	Close	High	Low	Prev
Sept	90.58	90.59	90.48	90.47
Dec	90.03	90.05	89.90	89.88
June	89.40	89.41	89.31	89.25

THREE-MONTH EURODOLLAR (IMM) $1m points of 100%

	Close	High	Low	Prev
Sept	90.00	90.02	89.90	89.91
Dec	89.58	89.60	89.46	89.42
March	89.26	89.27	89.15	89.09
June	89.03	89.05	88.93	88.87

STERLING (IMM) $e per £

	Close	High	Low	Prev
Sept	1.5020	1.5040	1.4965	1.4986
Dec	1.5030	1.5055	1.4980	1.5000
March	1.5060	1.5085	1.5000	1.5020
June	1.5090	1.5120	1.5040	1.5050
Sept	1.5110	1.5140	1.5085	—
Dec	—	—	—	—

GNMA (CBT) 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Sept	69-18	69-18	68-31	68-29
Dec	68-16	68-18	67-30	67-28
March	67-19	67-20	67-02	66-31
June	66-29	66-29	66-13	66-09
Sept	66-12	66-12	65-28	65-24
Dec	65-30	65-30	65-14	65-10
March	—	—	—	—
June	65-08	—	—	64-20
Sept	—	—	—	—
Dec	—	—	—	—
March	—	—	—	—
June	—	—	—	—

WEEKLY CHANGE IN WORLD INTEREST RATES

	Sept. 16	change		Sept 16	change
LONDON			**NEW YORK**		
Base rates	9½	Unch'd	Prime rates	11	Unch'd
7 day interbank	9 7/16	−⅛	Federal funds	9 7/16	+⅛
3 mth interbank	9½	Unch'd	3 Mth. Treasury Bills	9.06	−0.06
Treasury Bill Tender	9.2098	−0.0836	6 Mth. Treasury Bills	9.22	−0.10
Band 1 Bills	9 5/16	Unch'd	3 Mth. CD	9.55	−0.05
Band 2 Bills	9½	Unch'd	**FRANKFURT**		
Band 3 Bills	9 7/16	Unch'd	Lombard	5.50	Unch'd
3 Mth. Treasury Bills	9¼	−⅛	One Mth. Interbank	5.65	−0.025
1 Mth. Bank Bills	9 9/16	Unch'd	Three month	5.85	−0.025
3 Mth. Bank Bills	9 7/16	−1/32	**PARIS**		
TOKYO			Intervention Rate	12.25	Unch'd
One month Bills	6.78125	Unch'd	One Mth. Interbank	12.5625	+0.125
Three month Bills	6.78125	Unch'd	Three month	12.5625	+0.125
BRUSSELS			**MILAN**		
One month	9 7/16	+1/16	One month	17⅜	−⅛
Three month	9½	+1/16	Three month	17 7/16	−⅛
AMSTERDAM			**DUBLIN**		
One month	6⅛	+1/16	One month	12⅞	+¼
Three month	6 5/16	−1/16	Three month	12⅞	+1/16

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, and band 3 bills 34 to 63 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week. Band 4 bills 9⅜.

MONEY MARKETS

Weighing the possibilities

Conditions in the London money market had a nervous undertone last week, as traders tried to decide whether a strong pound and growing conviction that the U.S. Federal Reserve will not tighten its monetary policy was enough to outweigh UK money supply figures remaining outside the target range. U.S. money supply figures are now within the Fed's recently extended target range, but the UK August money supply figures were not altogether disappointing, and if the recent trend continues M3 may be down to the target level within the next few months, opening the way for a fall in clearing bank base lending rates. No one seemed able to predict the timing of any cut, but the Government would probably not be unhappy to see a move around the time of the Tory Party conference in three weeks' time.

Money supply was of obvious concern on both sides of the Atlantic, although the UK figures paled into insignificance when compared with events in the U.S. where the financial markets remain mesmerised by the weekly M1 announcement.

The overall credit position in London is still fairly comfortable, with no particularly large shortages occurring last week. On Monday an early forecast of a flat position das later revised to a small shortage of £50m, while on Tuesday the shortage was in the region of £350m. Wednesday's surplus was around £200m, and on Thursday the initial forecast of a small £50m shortage was revised to £200m, with the market falling some £300m short of its requirements on Friday.

In New York the Federal Reserve intervened to add liquidity at various times, but this was merely for technical reasons, and did not represent any change in monetary policy.

The Federal funds overnight rate was around 9½ per cent for most of the week, but rose to 9⅝ per cent early Friday.

LONDON MONEY RATES

Sept. 16 1983	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount Market Deposits	Treasury Bills Φ	Eligible Bank Bills Φ	Fine Trade Bills Φ
Overnight	—	9⅛-12	9¾-10	—	—	9½-10¼	9¼-10	—	—	—
2 days notice	—	—	9⅝-9¾	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	9⅞-10⅛	—	—	—	—
7 days notice	—	9⅝-9¾	9⅝-9¾	—	—	—	9½-9¾	—	—	—
One month	9 21/32-9 23/32	9⅝-9¾	9⅝	9⅞-9⅝	9¾	10	9½	9¼-9 5/16	9 11/16	10 3/16
Two months	9 9/16-9⅝	9 11/16-9¾	9⅝	10-9⅝	9 11/16	10	9⅜	9 5/16-9 11/16	9 9/16-9 11/16	10 1/16
Three months	9 9/16-9⅝	9 9/16-9 11/16	9⅝	10-9⅝	9 11/16	10	9¼-9⅜	9¼	9 9/16-9 21/32	9 15/16
Six months	9⅝-9 11/16	9 11/16-9 13/16	9¾-9 13/16	9⅝-9¼	10	—	—	—	9 11/16	9 13/16
Nine months	9 23/32-9 25/32	10-10⅛	9¾-9 13/16	10⅛-9¾	10⅛	—	—	—	—	—
One year	9¾-9 13/16	10⅛-10¼	10 1/16	10-9¾	10¼	—	—	—	—	—
Two years	—	—	10¾	—	—	—	—	—	—	—

ECGD Fixed Rate Export Scheme IV. Average Rate for interest period August 3 to September 6 1983 (inclusive) 9.930 per cent.

Local authorities and finance houses seven days' notice, others seven days fixed. Long-term local authority mortgage rates nominally three years 11 per cent; four years 11⅛ per cent; five years 11⅛ per cent. Φ Bank bill rates in table are buying rates for prime paper. Buying rate for four months bank bills 9 11/16 per cent; four months trade bills 9 15/16 per cent.

Approximate selling rate for one month Treasury bills 9¼-9½ per cent; two months 9 5/16-9 7/16 per cent and three months 9⅛ per cent. Approximate selling rate for one month bank bills 9½ per cent; two months 9⅜-9 7/16 per cent and three months 9¼-9 5/16 per cent; trade bills 9 29/32 per cent; two months 9 27/32 per cent and three months 9 25/32 per cent.

Finance Houses Base Rate (published by the Finance Houses Association) 10 per cent from September 1 1983. London and Scottish Clearing Bank Rates for lending 9½ per cent. London Deposit Rates for sums at seven days' notice 6 per cent.

Treasury Bills: Average tender rates of discount 9.2098 per cent. Certificates of Tax Deposit (Series 6). Deposits of £100,000 and over held under one month 9⅝ per cent; one-three months 9⅝ per cent; three-six months 10 per cent; six-12 months 10¼ per cent. Under £100,000 9½ per cent from September 13. Deposits held under Series 4-5 10 per cent. The rates for all deposits withdrawn for cash 8 per cent.

INTEREST RATES

EURO-CURRENCY INTEREST RATES
(Market closing rates)

Sept. 16	Short term	7 days notice	Month	Three Months	Six Months	One Year
Sterling	9⅝-9⅞	9 11/16-9 13/16	9⅝-9¾	9⅝-9¾	9 11/16-9 13/16	10⅛-10¼
U.S. Dollar	9½-9¾	9⅝-9⅞	9¾-10	9⅞-10⅛	10 1/16-10 3/16	10½-10¾
Can. Dollar	8¼-8½	8½-8¾	8⅞-9⅛	9⅛-9⅜	9 5/16-9 9/16	10-10¼
D. Guilder	6-6⅛	5⅞-6⅛	5 15/16-6 1/16	6⅛-6¼	6⅜-6½	6¾-6⅞
S. Franc	2-2¼	2¼-2½	4¼-4⅜	4⅜-4½	4⅝-4¾	4¾-4⅞
Deutschm'rk	5⅜-5½	5 7/16-5 9/16	5 9/16-5 11/16	5 11/16-5 13/16	5 13/16-5 15/16	6⅜-6½
Fr'nch Franc	12½-12¾	12½-12¾	12¾-13	14¾-15	16⅜-16⅝	16¾-17
Italian Lira	16-17	16-17½	17-17½	17⅝-18⅛	18½-19	19-19⅞
Belg. Franc. Conv.	5½-6½	8¾-9¼	9¾-10¼	10-10½	10½-11	10¾-11¼
Fin.	8⅝-8⅞	8¾-9	8¾-9	9¼-9½	9¼-10	10⅛-10⅜
Yen	6 5/16-6 7/16	6 5/16-6 7/16	6 15/16-7 1/16	6 5/16-6 7/16	6 7/16-6 9/16	6 7/16-6 9/16
D. Krone	14⅞-15⅜	14½-16	12¼-12¾	11⅝-12⅛	11¾-12	11¼-11¾
Asia $ (Sing.)	9⅝-9¾	9 11/16-9 13/16	9 11/16-9 13/16	9 15/16-10 1/16	10 1/16-10 3/16	10 3/16-10 5/16

FT LONDON INTERBANK FIXING
(11.00 a.m. SEPTEMBER 16)

3 month U.S. dollars		6 month U.S. dollars	
bid 10	offer 10 1/8	bid 10 1/4	offer 10 3/8

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK

Prime rate	11
Fed funds (lunch-time)	9⅝-9¾
Treasury bills (13-week)	9.06
Treasury bills (26-week)	9.22

GERMANY

Lombard	5.5
Overnight rate	5.5
One month	5.65
Three months	5.85
Six months	6.30

FRANCE

Intervention rate	12.25
Overnight rate	12.8125
One month	12.5625
Three months	12.5625
Six months	12.6875

JAPAN

Discount rate	5.5
Call (unconditional)	6.40625
Bill discount (3-month)	6.78125

SWITZERLAND

Discount rate	4
Overnight rate	2-3
One month	4⅞-4⅛
Three months	4 5/16-4 7/16

NETHERLANDS

Discount rate	5
Overnight rate	6⅛-6⅜
One month	6-6⅛
Three months	6⅛-6⅜
Six months	6½-6⅝

$ CERTIFICATES OF DEPOSIT

One month	9.5-9.6
Three months	9.7-9.8
Six months	9.9-10.0
One year	10.25-10.45

LONG TERM EURO $

Two years	11⅜-11⅝
Three years	11⅝-11⅞
Four years	11⅞-12⅛
Five years	12⅛-12⅜

SDR LINKED DEPOSITS

One month	8⅞-9⅛
Three months	9¼-9½
Six months	9 7/16-9 11/16
One year	9⅞-10⅛

ECU LINKED DEPOSITS

One month	9 13/16-9 15/16
Three months	9⅝-9⅞
Six months	9⅞-10⅛
One year	10 3/16-10 7/16

WALES SURVEY

The Welsh survey due to appear in today's paper, will now be published on Wednesday 28th September, 1983.

The Financial Times wishes to apologise to its readers, the Retail Trade and the advertisers within this survey, for the move.

FINANCIAL TIMES SURVEY

JAPAN

The country's remarkable industrial successes have produced a strong current account surplus, but a chronic domestic budget deficit has raised complex problems in managing the economy. Any attempt to boost imports will be handicapped while the Yen remains heavily under-valued

Headaches in the labyrinth

BY CHARLES SMITH, TOKYO CORRESPONDENT

WHETHER YOU go by its impressive economic indicators, by the fact that its women are now probably the best dressed in the world, or by the envious comments of competitors about its products and management techniques, Japan can probably claim today to have achieved the highest all-round success of any major industrial nation.

The fact that a good many things seem to be going right with the country, however, does not mean that Japan is immune to the worries that have dogged the rest of the world since the 1979 oil shock. By its own standards Japan's recent economic growth rate has been extremely low—so low that, during the first quarter of 1983, unemployment temporarily touched its highest levels since the late 1950s.

What may matter more than the growth rate is that, from about the middle of 1982, Japan seems to have become locked into a vicious circle so far as the management of its economy is concerned. The "negative linkage" between an abnormally large external balance of payments surplus, a huge domestic budget deficit and an unnaturally weak exchange rate seems to underlie almost every economic problem currently facing the country.

There is no sign so far that the government is about to find its way out of the labyrinth.

Of the three inter-related issues that are causing headaches for the Government of Mr Yasuhiro Nakasone, the one that is being taken most seriously—if only because of criticisms expected from the U.S. later in the year—is the apparently uncontrollable rise on the trade and current accounts of the overseas balance of payments.

Japan registered a "respectable" $9bn surplus in its 1982 fiscal year (the 12 months ending March 31, 1983) and apparently expected a roughly similar achievement in 1983. In fact it now seems likely that the current account will be in the black by $24bn during the current fiscal year and that the surplus on trade could exceed $32bn.

If these figures are not enough to indicate that Japan has got itself into a state of chronic imbalance on external account, it need only be noted that many forecasters expect the 1984 surpluses to be higher.

The reasons for what even Japan's own Government now admits to be an embarrassing situation include the fact that the country received a windfall bonus in March in the shape of a $5 per barrel cut in the price of its oil imports. The price cut is expected to save Japan about $6.5bn during the current year (which means the country will have benefited more than any nation except the U.S. from the Opec action).

Cheaper oil explains only a part of today's unlooked-for affluence. Far more important is the fact that, while Japan's exports have been growing healthily since early in the year, both the volume and value of the country's non-oil imports have been falling.

The refusal of Japan's imports to recover—or rather their obstinate insistence on continuing to fall—reflects the fact that although industrial production has started to climb since the early spring (on the strength of exports) personal consumption and capital investment by private industry have continued on a stubborn downward trend.

The Government has turned its face against more than a very modest attempt at reversing this trend by means of "Keynesian" reflation measures in part because of the huge budget deficits that Japan has been running since it last tried to reflate its economy by public spending in the late 1970s.

The other reason why the authorities apparently see little joy in trying to revive imports by boosting economic growth is that such an approach would leave untouched the last and biggest barrier against import recovery: the massive undervaluation of the yen.

Economists at the Economic Planning Agency believe that Japan may suffer an "import loss" of about $7.5bn in 1983 as a delayed reaction to the fact that last year the Yen sank to its lowest level against the dollar since mid-1977. But the obvious course of boosting Japan's imports (next year if not this year) by engineering a rapid appreciation of the exchange rate clearly is not as easy as some outside critics of Japan's economic policies seem to have assumed.

The Yen lost about 30 points against the dollar on average in 1982 chiefly because of a yawning gap between Japanese and U.S. interest rates which owed far more to actions taken by President Reagan than to anything that happened in Japan. Closing the gap by raising Japan's interest rates would be counter-productive in the opinion of the Economic Planning Agency in that it would merely discourage further investment in the recovery of the Japanese economy by Japan's own businessmen.

Another way out of Japan's difficulties—which the business world favours but which the government apparently has no intention of adopting—would be to go for growth by lowering Japanese interest rates even below their present levels. Here again the risks look considerably greater than the potential advantages.

At 5.5 per cent, Japan's discount rate is already much lower than the U.S. level and an active invitation to investors, both Japanese and foreign, to channel their capital from the yen in to dollars. The depressing

CONTINUED ON PAGE III

STATISTICS

Area:	377,700 sq km
Population:	118.7m (1982)
GNP (1982)	Y263,938.9bn
Per capita:	Y2.2m
Imports (1982, US$m):	131,931
Crude materials and fuels	84,529
Food	14,575
Machinery	9,112
Exports	138,831
Metals	21,215
Machinery	90,514
Textiles	6,240
Defence spending (1981):	Y2,399.9bn
Inflation (June):	2.0%
Unemployment (June):	2.6%
Exchange rate:	$=Y246.20 (9/9/83)

Mr Yasubiro Nakasone, the Prime Minister, with school students outside the Diet building. His softly-softly approach to Japan's economic problems could result in more options in the future.

CONTENTS

Jurek Martin on the new, more assertive foreign policy

Standing up to be counted

FOR MUCH of the post-war years, visibility has not been exactly a characteristic of Japanese foreign policy. Its cornerstone, not to mention umbrella, was the American relationship, its motivation international economic expansion and thus the furtherance of Japanese industry, and its tactics were to follow, not to lead.

Occasionally Japan was noticed when it was caught unawares (Nixon's "shokkus," for example) but for the most part it was discernible only in nuances on the margins of policy and to the extent that being non-controversial made it possible to sell goods to all and sundry.

Even though it had been for more than a decade the second largest economy in the non-communist world, Japan was, understandably perhaps, disinclined to adopt foreign policy positions commensurate with this stand that might threaten the stabiliy of its particular applecart.

In international economic policy deliberations, most notably, Japan was content to promise—to grow more or to cut its trade surpluses—but rarely to deliver; when pushed to the wall by its mentor, the U.S., it would, on pain of some self-sacrifice, go along with international embargoes (against the Soviet Union), but when asked by a less central partner to stand up and be counted (Britain over the Falklands, for example) Japan politely declined and adopted a more neutral position.

Changing course

If, as can be reasonably argued, Japan's foreign policy reached an apogee of self-effacement under Mr Zenko Suzuki, then it has certainly changed course, dramatically, under Mr Yasuhiro Nakasone. This is not to infer that Mr Nakasone is doing all the right things for Japan, for that is eminently debatable (too close an identification with a regime of President Reagan's colour may not be in either Japan's or the world's interests).

Nor are his policies set in concrete, for, according to measurable Japanese public and political opinion, what he says and does seems to go down far better in Washington and London than in Tokyo (or Moscow). But, by any yardstick, he has in 10 months made at least a mark and conceivably a lasting difference.

The lowest, but far from base, common denominator is that Japan has acquired a confident voice in world affairs, capable not merely of surviving but actually contributing to, and even enjoying, the likes of the annual economic summits. But, more than this, since assuming office Mr Nakasone has:

- Signed the Williamsburg INF declaration, effectively associating Japan, for the first time, with European as well as American security concerns. The Japanese Foreign Ministry likes to insist that this constitutes no real change in policy, but its reservations greatly underestimate the symbolic significance of Mr Nakasone's commitment.
- Declared Japan to be "an unsinkable aircraft carrier" against Soviet aggression (his exact words have been challenged but not their import) and announced Japan's willingness to expand its defence capabilities in the sea-lanes stretching up to 1,000 miles from its own shores.
- Authorised the sale of Japanese military-related technology to the United States in spite of domestic political conventions against such transfers;
- Pushed through the Japanese political process a variety of measures further opening the Japanese market to foreign goods, with more promised. His initiatives have yet to bear fruit and are widely derided outside Japan as insufficient but they did entail a certain political nerve;
- Cultivated, successfully, relations with the Association of South East Asian Nations (Asean) to the point where Mr Nakasone now feels he may reasonably represent their positions in the deliberations of the major industrialised countries.

It has helped that most of the Asean regimes are comfortable politically with Mr Nakasone but this should not minimise the emergence of Japan as a co-operative regional force. He has gone out of his way to improve the traditionally fractious relations with South Korea, the first country he visited after becoming Prime Minister.

But perhaps nothing has better symbolised the present government's determination to be more than a cipher in world affairs than its assertive role in the aftermath of the Soviet downing of the South Korean airliner. Here was a concrete international crisis, with major East-West dimensions, in which Japan has played anything but a deferential role.

It was Japanese intelligence that broke the story and having gathered the ball the government continued to run with it, at the United Nations and in its unilateral actions, taking in the process the overt risk of further cooling relations with the Soviet Union.

Becoming one of President Reagan's best friends does not, of course, solve all Japan's problems at a stroke, even with the U.S. Standing four square with Washington against the Soviet Union is not going to prevent the U.S. from asking Tokyo to spend more on defence at a time of great budgetary austerity.

It does not deflect trade friction, other than at the political margin; and it does make demands of Japan, in a variety of fields, that it is not necessarily ready to meet.

More logically, relations with European nations should be closer than they are, Japan and the larger European countries have a lot in common, as trading nations with varying, but strategically limited, defence capabilities. Occasionally, a sense of common interest emerges, for example in this year's attempt to impress on the U.S. the dangerous economic consequences of an ever-rising dollar, or even when Japan was induced to put a ceiling on the export of video cassette recorders to Europe. But too often, it still seems, the European-Japanese dialogue collapses into commercial acrimony.

Common interest

Or, as becomes increasingly likely, Japan's emergence as a factor on the global scene threatens to complicate the eternally uneasy American-European axis. Conceptually, Japan's insistence on global arms control (it still publicly supports the "zero option" proposal) could, if Washington feels compelled to oblige Japan, render unreachable any INF agreement in Geneva covering the European theatre. Such a development, hypothetical as it now is, would not please Europe.

There are other risks inherent in running a high profile foreign policy. Public expectations may be disappointed. Right now, because of the sense of public outrage in Japan over Russia's shooting down the KAL aircraft and consequent support for the Government's positive role, this seems less of a threat to Mr Nakasone. It has, at least temporarily, submerged the reservations about his conduct of foreign affairs that was only too evident earlier in the year.

But this is not to say that if Japan is battered from here to there with trade demands by the U.S. and Europe (with the Soviet Union only too happy to chip in with its brand of fomentation) that the Japanese politicians and public will not feel let down.

Equally, regional relations, currently on a high plane, are not immune to reverses. Mr Nakasone has led the ASEAN nations, South Korea and even the People's Republic of China to expect a lot not all of which, in aid and trade, Japan may be in a position to deliver.

Japan is worried about the cut throat industrial competition from the newly-industrialised countries who form ASEAN's backbone and Japanese industry is proving distinctly cautious about both encouraging further development in those countries and in permitting unrestricted entry of their goods into Japan.

Nor, for all Moscow's egregious behaviour, is it automatically accepted in Japan that the Soviet Union is not to be trusted. Japanese industry, for example, is anxious to recover a Soviet market that it feels it lost to Europe during post-Afghanistan sanctions and has not taken kindly to suggestions from the government that furthering trade with the Soviet Union might not be in Japan's interests.

Moreover, for all the tensions in the political relationship, Japan still sees Siberian natural wealth as a valuable, and possibly reliable, resource.

But in the last analysis Japanese foreign policy still hangs on the American connection. The U.S. ambassador in Tokyo, the venerable and immensely respected Mike Mansfield, has described it as the most important bilateral relationship the U.S. is engaged in. Currently it is a relationship featuring political commonality of interest and commercial tension in roughly equal parts.

It is obviously not immutable: the balance of the component parts of the relationship may change. So may governments in either country and with an American election just over a year off and a Japanese one much closer, the prospect is becoming imminent.

New path

Continuity in Japan is more likely than in the U.S. where a shift in power in either the White House or Congress (one of which, at the minimum, seems currently probable) can create difficulties for Japan—as can an incumbent President whose policies are held hostage by electoral imperatives.

Thus, for all that the present Japanese Government would like to continue to deal with the present U.S. Government for years to come, it is unlikely to have that luxury. And this perhaps will be the real challenge to the firmness of the new path Mr Nakasone is trying to carve out for Japan.

The hawk may yet have to don dove's clothing, or even grow a new set of talons, if it wants to continue to fly in the skies of world power.

The great defence debate

JAPAN, a country whose defence output accounts for only 0.4 per cent of total industrial production, whose per capita expenditure on defence is well below even Holland's whose own military capabilities are widly regarded as negligible, and whose post-war constitution and political conventions severely limits military development, has started in earnest what is certain to be a protracted domestic debate on the country's appropriate position in international security.

So far, more words have been expended than money, but the government of Mr Yasuhiro Nakasone is under constant pressure from Washington and some of the words have been, by Japanese standards, positively revolutionary.

Japan has, for example, inserted itself far more insistently than previously into the question of the limitation of intermediate range nuclear missiles.

Somewhat to the consternation of European nations, and possibly to the discomfiture even of the U.S., it remains four-square behind a global INF solution (as expressed by President Reagan's effectively discarded "zero option" solution).

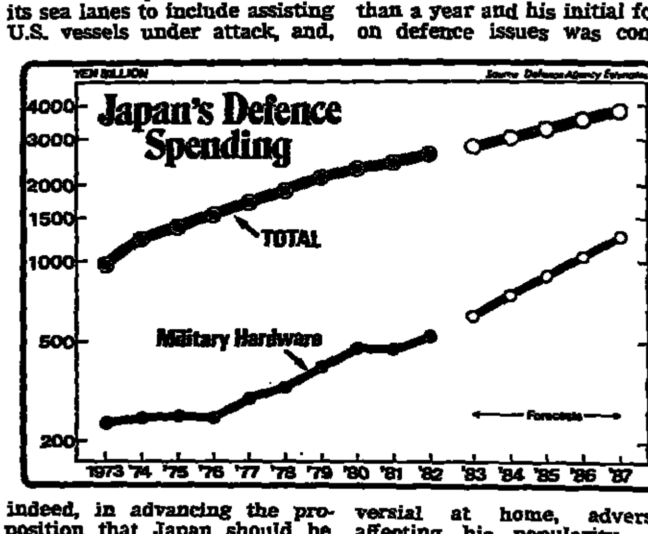
It has made clear that it cannot accept any relocation of Soviet SS20 missiles from the European theatre to bolster the already formidable Soviet arsenal directed at Asia.

Earlier this year there was a spate of reports that Japan, with some encouragement from the U.S., was seeking a closer direct association with the North Atlantic Treaty Organisation (NATO) rather than having to deal through the U.S. The approach, more political than military, ran up against French objections, but could well be renewed.

In bilateral defence relations with the U.S., Japan's shield and protector, the new Tokyo government, while not departing radically from trends laid down by its predecessors, has gone out of its way to meet some, if not all, of Washington's wishes.

It exempted defence spending from the sharpest of its budgetary axes and it has authorised the transfer of military-related technology to the U.S. Mr Nakasone asserted in Seoul that the peace and stability of the Korean peninsula was integral to regional security, including Japan's.

The Prime Minister has been much more forthcoming than his predecessors in describing the U.S. relationship as an "alliance," in defining the parameters of Japanese defence of its sea lanes to include assisting U.S. vessels under attack, and,



indeed, in advancing the proposition that Japan should be "an unsinkable aircraft carrier" against the threat posed by Soviet might: The Self Defence forces now rarely neglect an opportunity for joint military exercises with U.S. troops.

Although all this fits in with the widespread perception of Mr Nakasone as a hawk on defence issues, the Prime Minister nonetheless has had to move with some care. The 1983 Defence White Paper, for example, goes to some lengths to justify its contention that policing the sea lanes for 1,000 miles does not constitute the sort of "collective" security arrangement specifically proscribed by the Constitution.

Mr Nakasone himself has more or less dropped from public view his long-held belief that the time is approaching to re-write the "peace" constitution to reflect Japan's current position in the world. He insists that Japan still abides by its non-nuclear principles and the political commitment against arms exports (transfers to the U.S. notwithstanding).

His government is continually ducking the question of whether or not defence spending will exceed the ceiling of 1 per cent of GNP which is considered something of a political flashpoint in Japan (it currently stands at 0.98 per cent, according to the 1983 fiscal year budget, but could well pass the figure next year).

His caution is understandable. He has been in office less than a year and his initial focus on defence issues was controversial at home, adversely affecting his popularity. He probably needs the security of a general election mandate before going much further.

Even then he would have to tread carefully in dealings with the U.S., itself holding elections next year, and the countries of the Association of South East Asian Nations (ASEAN), many of which are openly nervous about a revival of Japanese militarism.

An immediate problem, one unlikely to disappear overnight, is the tightness of Japan's budget. On the one hand this means that increasing defence outlays at the expense of domestic programmes invite domestic political criticism. On the other, it follows that defence spending is unlikely to go up by anything like as much as the U.S. would like.

The current prognosis for the 1984 fiscal year is that the overall budget may contain no real increase in spending, but that defence will go up by about 6 per cent.

If there is an ace in the government's hand bolstering the case for an expanded defence effort it is the Japanese public's enhanced perception of the threat posed by the Soviet Union. This was brought home forcefully by Russia's shooting down of the Korean airliner just off Japan's northern shores — and, incidentally, by the recognition that it was Japanese intelligence monitoring that provided the world with both the first and fullest details of the incident.

Japanese-Soviet relations have been frosty for years. There are many reasons for this, not least of which is the extraordinary heavy-handedness of Moscow in trying to drive a wedge between Japan and the U.S.

There could well be a genuine "guns versus rice" debate in Japan that might be made to work to the Soviet Union's strategic advantage but, at almost every turn—the Korean airliner incident being merely the latest — Moscow shoots itself in the foot. Washington's treatment of Japan has often been cavalier and insensitive, but has rarely lapsed into total egregiousness.

Yet the probability is that if Moscow concludes that Japan under Mr Nakasone is serious about rearmament, it will devote to Japan the sort of attention previously directed at European nations caught in the nutcracker of big-power confrontation.

Another role in the domestic defence debate is certain to be played by industry. At present the defence sector is neither particularly large (roughly Y1 trillion, $4.2bn) in total annual sales nor very profit-oriented, but changes are clearly under way. Japanese industry is only too well aware of the commercial spin-offs of greater research and development in defence in, for example, aviation, computers and communications equipment.

The same awareness worries U.S. industry though not, apparently, in its hunger for Japanese technology, the U.S. Government. Currently much Japanese defence production is based on imported technology and manufactured under licence, even though 80 per cent of defence procurement is domestically made. Its growth seems assured, which is more than can be said for other once-powerful sectors of Japanese industry.

J.M.

Cult of the personality a strong influence

THERE IS a great consistency about Japanese politics. Individual governments come and go—Japan is now under its fifth Prime Minister in 10 years—but the party endures. The Japanese Liberal Democrats, who may be democratic but are certainly not liberal, constitute the establishment. It sometimes seems that any study of Japanese politics can be profitably confined to analysing what goes on inside the LDP and its constituent membership.

Apart from a general conservatism that runs the full gamut from sopping wet to hardline dry, the LDP knows few of the ties that classically bind political parties together. Looser than even American Democrats, it is essentially a collection of interest groups, underpinned financially by corporations, electorally by a voting system inordinately weighted towards conservative rural areas and, in the exercise of power, by a bureaucracy that has long since ceased to worry that changes in government might mean major changes in policy.

The 35-year conservative grip on Japan's political reins has been enhanced by the febrile and fractured nature of the opposition. Yet the LDP has itself shown much political skill in ensuring its supremacy: its methods have been classical—money, patronage and never getting too far ahead of the wishes of its supporters—and the success of the Japanese economy over the years has certainly helped quiet the voices of disaffection.

The last year has produced scant evidence that this political stability is in any danger. Yet, almost paradoxically, and contrary to much external belief, Japanese politics are nothing like as boring as they therefore ought to be. This is principally because the cult of the personality represents a strong strain in the composition of Japanese politics. The LDP itself is more than a loose amalgam of interest groups: it also consists of a number of groupings of politicians, often in sharp competition with each other, under one man's banner.

More than this, every Japanese public opinion poll consistently shows that the elector casts a vote far more on the basis of a candidate's personality than on the party he or she represents.

Thus the genuinely interesting developments in Japanese politics over the last year have all really centred on the role of individuals. On a national level, the obvious focus has been on Mr Nakasone, himself a product of the anti-establishment movement within the establishment, and on Mr Kakuei Tanaka, the "shogun" in the darkness awaiting the Lockheed court verdict. On a local level, the LDP's hegemony was successfully challenged in prefectural elections in the spring in Hokkaido and Fukuoka by two opposition candidates who won more on the strength of their personalities than their policies.

Articulate

For all his reputation as a bit of a renegade and opportunist, it was not surprising that Mr Nakasone easily won the LDP's leadership contest last November, and hence the Prime Ministership, after Mr Zenko Suzuki had abruptly resigned. It was, after all, his turn: his generational compatriots on the LDP treadmill, Fukuda, Ohira, Miki, Tanaka, had all made it to the top, while none of the relative newcomers, Abe, Miyazawa, Nakagawa (now dead) had overwhelming power bases.

Mr Toshio Komoto, Mr Nakasone's most serious opponent for the leadership, thought he had such a base, as well as a case in his call for a more activist economic policy than that practised by Mr Suzuki's government. But Mr Komoto, then head of the Economic Planning Agency and therefore, nominally at least a leader member of that government, quickly found both were inadequate. Though leading the smallest LDP faction in the Diet, Mr Nakasone also enjoyed the backing of the biggest, that beholden to Mr Tanaka, the maestro of Japanese machine politics. The result was never in doubt.

It probably also helped Mr Nakasone that he has the local reputation of being a bit of a "doer," which stood in almost complete contrast to the paralytic passivity of Mr Suzuki. By 1982, there was a growing sense in Japan that Mr Suzuki's prime talent appeared to be in sweeping problems under the carpet and that this was really not quite enough at a time of growing international and domestic travail. Moreover, Mr Nakasone was nothing if not articulate, whereas Mr Suzuki's public utterances were, to put it politely, unmemorable.

As examined elsewhere in this survey, Mr Nakasone has lived up to his activist reputation in his conduct of foreign policy. The evidence on the domestic front is less clear cut for his words have not always been matched by his actions, especially in economic policy. But it was significant, in the early months of his government, that more than once Mr Nakasone abandoned the traditional consensus approach in ramming through his Cabinet certain controversial proposals, such as import liberalisation.

Initially, the Japanese political establishment and its close ally, the press, looked askance at the Nakasone approach. The LDP hierarchy, Mr Tanaka apart, prefers the consensus approach: it does not like embarking down roads without knowing where they lead. In their view the Prime Minister was going too far too fast, especially in the heady climes of Washington, by freely discussing such concepts as revising the constitution and furthering Japan's defence role beyond conventionally accepted limits.

But, from this spring on, with a noted boost from his performance at the Williamsburg summit in May, the Nakasone stock has been soaring. Certainly no harm was done to it by the June elections for half the Upper House of Councillors, which saw the LDP gain three seats and retain its cast-iron control, and the principal opposition party, the Socialists, do disastrously. Had the ruling party done badly, the Prime Minister would have been the scapegoat: the corollary is that having done reasonably well his political position has become that much stronger, as has been observed in subsequent decisive political manoeuvring.

Officials sort the votes at a Tokyo counting office during June's elections for the Upper and Lower Houses. In the Upper House the LDP retained its cast-iron control.

However, it is far too early to determine whether or not Mr Nakasone will be more than a two-year premier and/or whether indeed he is generally perceived as a success or failure. One major reason for this is his relationship with Mr Tanaka. If there is one subject which apparently unites the disparate factions of the LDP, except Mr Tanaka's, not to mention the political opposition, it is the cause of "political ethics," which may be translated as ensuring that Mr Tanaka gets his come-uppance.

In forming his government, it was universally concluded that Mr Nakasone was not merely repaying his debt to Mr Tanaka but was positioning himself somehow to relieve the former Prime Minister of his Lockheed cross. Two of Mr Tanaka's intimates, Mr Susumu Nikkaido and Mr Masaharu Gotoda, were given positions of great influence while, overall, nearly a third of the Cabinet was drawn from the Tanaka faction. Mr Nakasone maintained he was merely picking the best people but hardly a soul believed him.

Independence

Six months later, the real nature of the Nakasone-Tanaka relationship is shrouded in mystery. The most notable example of Mr Nakasone's apparent independence was his refusal to accommodate Mr Tanaka's desire for a double election (of both Houses of Parliament) this summer. This came as quite a surprise to the rest of the LDP establishment which, while basically opposed to a double election, was behaving as if one was inevitable. Earlier this year, in spite of dark speculation to the contrary, the Government prosecution in the Lockheed case had indeed asked that the maximum sentences be handed out on the former Prime Minister.

The next crunch looms on October 12 when the Lockheed verdict, widely assumed to be one of guilty, is handed down. Mr Nakasone's response then will be critical in the shaping of the public perception of whether or not he is his own man.

This year, the Tanaka case has been a flickering candle of hope to the political opposition in that it has made possible intermittently effective co-ordinated action in the Diet. A rare display of such unity in the spring even extracted from Mr Nakasone a promise to cut income taxes (though when, or how, this is redeemed is another matter).

It is, of course, never easy for an opposition as fragmented as Japan's to get its act together: in any case, at least two of the minor parties are more logical bedfellows of the LDP than the political left.

Of late, the biggest stumbling block to any unity has been the internecine warfare inside the Japan Socialist Party, still, with about 15 per cent popoular support, the largest single opposition grouping. Within the last few months, the ascendancy of moderates in the JSP and a new party chairman-designate has at least made possible communication with other parties and, as seen, some parliamentary tactical co-operation.

But a real meeting of minds and forces still seems a long way off and may only be brought about by excesses on the part of the LDP.

The political circumstances, therefore, do not as yet provide a clear picture of the future of Mr Nakasone. His determination to serve more than the two years of his four predecessors is not in doubt. Nor is the LDP's secure hold on power. It is fro mwithin the LDP, not without, that the real challenges to his authority will emanate.

Acceptable

The elections to the Lower House, whenever they are held, will be extremely important. Largely because it received an artificial electoral boost in 1980 when Prime Minister Ohiiın died on the eve of polling, the LDP is expected to lose a few seats next time.

Equally important is how well the individual LDP factions do: a decline in the numbers of Mr Tanaka's adherents could produce a shifting in the balance of power inside the party, while an increase might compound intra-party frustration, from either of which Mr Nakasone could lose, or benefit.

And, throughout the process, under the aegis of the hierarchy's power brokers, the jockeying for position by LDP alternatives to Mr Nakasone will continue apace.

Thus, to survive, Mr Nakasone has not merely to dodge the electoral bullet, but also stay clear of the knives behind the arras.

Jurek Martin

Headaches in the labyrinth

CONTINUED FROM PAGE 1

conclusion seems to be that in the short run Japan's policymakers have little option but to sit tight and hope that the growth of demand elsewhere in the world will help to refloat their economy.

The fact that neither Mr Nakasone nor any other person who might fill the office of Prime Minister in the near future is likely to be able to come up with a solution to Japan's short-term economic problems does not mean that nothing can be done in the longer term. The fiscal problems could be alleviated, if not solved, by a thoroughgoing reform of the tax system which would place far more emphasis than at present on indirect taxation, while possibly giving some relief to the nation's hard-pressed wage and salary earners.

Inadequate levels of imports could be dealt with "surgically" by the radical liberation of the import barriers which have made Japanese agriculture one of the most protected farm sectors in the world. The problem is that moves in either or both of these areas would force the Government to confront some of its principal supporters in the electorate — and it so happens that the ruling Liberal Democratic Party faces a general election during the first half of 1984.

Given the closeness of the election, and the fact that Mr Nakasone's own position as President of the LDP, and thus as Prime Minister, depends critically on how the party performs, he seems very unlikely indeed to take bold action with regard to taxes or farm imports (or indeed any other area of economic policy) for the next six to nine months.

A very modest cut in income tax, which will be more likely to worsen Japan's fiscal problems than to mend them, coupled with some cautious abolitions or enlargements of farm import quotas, may be the most that Mr Nakasone will risk between now and the end of the year. This is despite the fact that, on the farm question, he will be under severe pressure to make some concessions when President Reagan visits Japan in November.

If Mr Nakasone succeeds in maintaining his "softly softly" approach to the economy's problems until the nation goes to the polls and if, further, the result of such caution turned out to be a comfortable election victory for the Liberal Democrats, the options facing Japan could begin to look much more varied than they do at present.

Some action to bring Japan's tax take up to levels that are closer to those of other advanced industrial countries seems almost certain in 1984 or early 1985. So, on the expenditure side, does a further substantial rise in the defence budget, which is one of Mr Nakasone's personal preoccupations.

Higher taxes, a heavier emphasis on defence and a possible confrontation between the government and farmers could make the Japan of mid-1984 onwards a more contentious place. But given the problems that lie just below the country's affluent surface, this may be inevitable.

Planting rice on Shikoku Island, now mostly done mechanically. Japan's farm sector is closely protected.

The Government is being pressed to introduce a reflation package to boost the export-led recovery now under way.

Hopes of a return to sustained growth

JAPAN'S economy could begin to show the first signs of a genuine return to "self-sustaining" growth later this year, after four years of painful adjustment to the problems caused by the 1979 oil shock, according to the Economic Planning Agency.

However, the EPA, as well as other Japanese economic analysts, seems only too well aware that recovery is, for the time being, a tender plant that risks being uprooted. Particularly worrying is the possibility that Japan's trade partners could lose patience with the country's inability to control the growth of its external payments surplus before the economy begins growing strongly in 1984 or 1985.

One of the most positive points about Japan's economic performance so far this year has been the completion of the long process of inventory adjustment on which private industry embarked after the 1979 oil shock (and which had to be resumed and intensified after exports suddenly started falling in late 1981). Officials at the EPA who have kept a careful watch on inventories claim these are now at normal levels in every major industry except steel and textiles and that some reinvestment in inventories can accordingly be looked for.

Next in importance to the inventory situation comes the fact that after a steep decline that lasted for well over a year Japan's exports have begun growing moderately. The export volume index showed a 3.1 per cent decline for the whole of 1982 (with the dollar value of exports down much more steeply). But exports were up by 0.4 per cent in April-June with "every prospect," according to the EPA, that growth will remain firm until the end fo the fiscal year.

The recovery of overseas demand for the products of Japanese industry coupled with a return to normal inventory levels inside Japan explains the third major element in the 1983 economic upturn—the fact that industrial output is rising again.

The industrial production index turned "positive" for the first time in the April to June quarter showing a rise of 1.8 per cent over the previous year's level, before going on to score rises of 2.2 per cent and 2.1 per cent in May and June respectively.

Indicators

Increasing industrial production — coupled with a series of three consecutive positive readings from the EPA's "diffusion index" (which lumps together a wide selection of different indicators to give a general picture of the economy's state of health) add up to a fairly convincing picture of recovery, the agency claims. But officials admit to concern about two other recent sets of indicators that still look far from favourable.

One negative component in the current economic equation is that capital investment spending by private industry is expected to be worth less in 1983 than last year, and substantially less in the case of big capital-intensive industries such as steel and cars. A second, somewhat depressing factor from the viewpoint of the EPA is the outlook for private consumption which rose steeply in 1982 (apparently in response to a sharp fall, that year, in the rate of consumer price inflation) but which now appears to be falling.

Economic analysts at the EPA say they have detected some signs during the past month or two that Japanese business is belatedly revising its investment plans upwards again and that the total value of plant and equipment acquired during 1983 might turn out to be level with the 1982 figure (although manufacturing investment will still show a substantial fall).

Private consumption may also have started to pick up from mid-summer onwards when unusualy hot weather sent the population of Japan shopping for air conditioners and summer clothing. But in this area, as in the case of manufacturing, it seems too soon to assume that Japan's initially export-led recovery is already feeding through to produce a general revival of demand inside the country.

In order to ensure that the economy as a whole does start to grow in response to the initial thrust from exports both the Economic Planning Agency and the Ministry of International Trade and Industry (MITI) are hoping that the Finance Ministry will agree, later this year, to a "substantial" reflation package that ideally should include, not only the income tax cut already promised to Japanese wage earners by Prime Minister Nakasone, but also an investment tax credit scheme designed to encourage capital investment by small companies.

The size of the income tax cut should be at least Y1,000bn in the EPA's view in order to produce the desired impact on spending (though the agency adds that this year's oil price cut has already presented Japan with an infusion of spending power roughly equivalent to a Y1,400bn tax cut).

The Finance Ministry, however, which continues to give priority to cutting back Japan's enormous budget deficit is said to be thinking in terms of a Y300bn cut.

Apart from persuading a reluctant Ministry of Finance to pump life into the economy through fiscal measures of various kinds the EPA would like to see the Bank of Japan cut its discount rate from the present long established rate of 5.5 per cent as a means of encouraging hesitant investors in the business community.

The Bank of Japan appears to agree that Japan's domestic economic situation requires an interest rate cut if only because "real" interest rates have risen sharply over the past year and a half as inflation rates have fallen. It has refused, however, to make any change in the present rate so long as U.S. interest rates remain high, and so long as the resulting interest gap with Japan continues to undermine the value of the yen.

The fact that the current yen-dollar exchange rate of around $1 equals Y245 probably understates the yen's true value by between 15 and 20 per cent might seem at first sight to be a windfall for an economy whose main hopes of recovery over the next few months will rest on the growth of its exports. But Japanese officials at the EPA and elsewhere emphatically decline to see it that way.

The cheapness of the yen in both 1982 and 1983 has done a lot to inhibit imports, according to the Economic Planning Agencies annual White Paper, which calculates that a 10 yen to the dollar depreciation on the yen means an import "loss" of $600m in the year it occurs and of no less than $1.9bn a year later.

Competitive

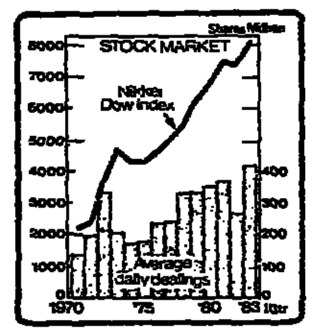
The distorted exchange rate has had much less impact on exports because Japan's exports are highly competitive anyway —and because of the restrictions that many western countries now maintain on the entry of various types of Japanese manufactured products.

The overall picture of Japan's current economic situation that emerges from conversations with economic officials in various ministries is that things at long last seem to be looking up for the world's third largest industrial economy, but that if they were not there would not be much the government could do about it anyway.

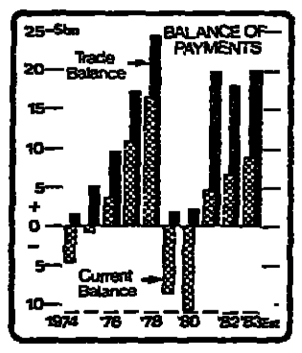
The risk appears to be that economic recovery in the U.S. and in other Western countries might peter out before recovery gets under way properly in Japan, or that the U.S. and western Europe might decide to "punish" Japan for its massively increasing current account and trade surpluses by introducing a further round of restraints on imports.

If either of these fears were realised it could be too late for the Government to do much to save the situation.

Charles Smith



Many key indicators for the Japanese economy have remained flat during the past year. Two that have not are the Tokyo Stock Market index and the current account of the balance of payments. Record current account surpluses have coincided with a series of stock market peaks.



Glyn Genin

Assembling single-lens reflex cameras at Nikon's Tokyo plant. A recovery in overseas demand for Japanese products has enabled the country's industrial production to rise again.

Budget constraints hit plans to double overseas aid

AS A nation bound by its post-war constitution not to use military force as a means of settling differences with its neighbours, Japan, not surprisingly, attaches great importance to peaceful methods of gaining friends and extending its influence in the outside world. Foreign aid (normally known to Japanese officials as "economic co-operation") is one such method. Yet Japan, despite the vigorous efforts of the Ministry of Foreign Affairs, has had rather modest success so far in turning its aid programme into an effective instrument of foreign policy.

Japan ranks fourth among the major industrial nations as a donor of "Overseas Development Assistance" (ODA) but only 13th if its ODA is measured as a percentage of Gross National Product. Since the late 1970s the Government has undertaken two aid doubling programmes, but the second — covering the years from 1981 to 1985 — now seems condemned to almost certain failure.

Constraints on the domestic budget, the unexpected weakness of the yen in terms of the dollar (which serves to undermine the dollar denominated value of the aid programme) and the reluctance of the U.S. to co-operate in plans for increasing multilateral aid all, apparently, bear a share of the blame for the disappointing progress made in increasing Japanese aid flows.

Officials at the Economic Co-operation Bureau at the Foreign Ministry say that Japan will be able to bring its aid contributions to the target figure of just over $21bn over the 1981-85 period if aid can be made to increase by 28 per cent in dollar terms over each of the final two years of the programme period but go on to admit, rather ruefully, that this is unlikely to be possible.

HOW AID HAS FALLEN
(in U.S. dollars)

	1980	1981	1982
Bilateral aid	1.96	2.26	2.37
Multilateral aid	1.34	0.91	0.66
Total overseas development assistance	3.30	3.17	3.02
Per cent of GNP	0.32	0.28	0.29

Aid "doubling" would therefore seem to have receded into the indefinite future as viable policy objective for Japan. What remains is to ensure that the aid that is disbursed is offered on reasonable terms and to try to make a rational choice between the many claimants for Japanese assistance both in terms of nations and in terms of projects.

So far as types of aid are concerned Japan traditionally has given preference to "project" loans over mere balance of payments assistance (despite periodic pressure from the U.S. to give the latter type of aid). Japan also appears to be known for its meticulous approach to the vetting and approval of eligible projects.

In explaining this attitude a senior official points out that there is no tradition in Japan of giving for charity (as is the case, for example, with some of the north European nations that are major aid donors). Aid is given fundamentally to help developing nations help themselves—which means that it should lead directly either to an increase in GNP—or at least to an enhancement of human skills which can later create added wealth.

When it comes to the choice of recipients Foreign Ministry aid officials dislike admitting that Japan gives aid primarily for "strategic" reasons. They agree, however, that aid goes first and foremost to nations which have a deep "political interdependence" with Japan. It also goes, in increasingly large amounts, to recipients, such as Pakistan or Thailand, which happen to be located next door to scenes of actual conflict.

Allocations

Japan's aid to Pakistan has increased four-fold over the past five years while Thailand has overtaken Indonesia as the largest South East Asian recipient of Japanese assistance. Nations outside southern and east Asia which have received greatly increased Japanese aid allocations over the past few years include Egypt, Sudan, Tunisia, Kenya and Tanzania. Japan also took a major role in western efforts to rescue the economy of Turkey through emergency aid disbursements.

Japan's recently concluded four-year aid agreement with Korea means that the South Koreans will be receiving a gradually increasing share of total Japanese aid disbursements over the next few years. But the Foreign Ministry seems determined to ensure that, somehow or other, this will not result in others going hungry.

A nation which has ranked extremely low on Japan's aid priority list in the past few years but which could shortly be moved up a notch or two is India. If India does begin to get more Japanese aid in the near future this will be at least partly because of the slight shift in the Indian Government's foreign policy orientation away from the Soviet Union and towards the West that appears to have taken place in the recent past.

Looking beyond the mid-1980s, Japanese officials seem to expect a gradual decrease in the rate at which Japan will be able to increase disbursements of yen-denominated loans, even to favoured donors, together with a continued hardening of the (admitedly very low) interest rates at which such loans will be offered. The clouds, in short, are gathering so far as the future of Japanese aid is concerned — but in this respect Japan is probably not alone. Scaled down targets and reduced expectations seem to be the norm for aid donors and aid recipients almost throughout the world.

Charles Smith

Most Japanese investment overseas has gone into commerce and finance

Manufacturers remain wary about investment abroad

NOTHING illustrates the predicament facing the Japanese about investing in foreign countries better than the anguish at Nissan about whether to build a car plant in Britain. It is now nearly three years since the project was first mooted and it seems that even a decision to go ahead — about as predictable as movement in the San Antonio fault line — would do little to dispel the apparent wariness in Japanese industry about leaving home.

The Nissan project is on the shelf because of the company's inability to settle an internal debate that mirrors precisely the dilemma facing most Japanese companies that export to the West. On the one hand, there seems to be broad agreement that industries should invest in markets that they have successfully penetrated.

On the other hand, and this is certainly the position of one camp at Nissan, is investment in some of the Western markets worth it? How long, if ever, would it take Nissan to recover the minimum Y100bn it would have to spend to set up in Britain?

Purchases

It is clear that while foreign investment from Japan has risen sharply since exchange controls were completely liberalised in 1981, the bulk has gone into commerce and finance. Actual manufacturing investments in 1982 amounted to only $2.07bn while purchases of stock abroad totalled $3.3bn and loans $4.2bn, and those figures do not buck the trend.

The wariness is particularly marked in regard to Western Europe, which although taking about 18 per cent of the total value of Japanese exports, wins only about 11 per cent of Japan's direct investment. The U.S., on the other hand, takes some 26 per cent of Japan's exports and, on average, gets about 26 per cent of Japanese foreign ivestment in return.

Europe is obviously a more complicated market for the Japanese than the U.S. and is often seen as disparate, indecisive and difficult, despite (or perhaps because of) the presence of the EEC, to anticipate. Certainly, Japan's investments in manufacturing in Europe are a poor third to commerce and finance. Last year $139m of new manufacturing investment flowed into Europe from Japan compared with $479m in commerce (chiefly securities) and $258m in banking and finance.

One problem facing Japan's industrial leaders is that while the possibility of manufacturing in Europe or the U.S. may, in theory, prove to be the smoothest way into the markets in the West, perceptions about the functions of any investment seem to vary widely.

Delegates to a recent conference on factory automation in London had waited late into the afternoon especially to hear an address by a representative of the Japanese electronics company, Fanuc, talk to them about a new plant built by the company in Luxembourg at a cost of around $100m. After a series of colourful slides of the gleaming new plant it became apparent that the enterprise boasted a human staff of three plus an assortment of robots. The delegates were impressed but nonplussed.

"I thought they were supposed to be providing jobs," said one. "After all that's why we've been asking them to come." The Japanese apparently see things differently, as explained by a writer in Japan's leading economic newspaper Nihon Keizai Shimbum.

"Japanese enterprise investment in developed markets such as the United States and Europe also creates new types of friction," he explained to his readers, "especially when such investment involves construction of a major manufacturing plant."

Any Japanese corporate giant which wants to enter production in these markets tends to construct a factory with fully-fledged automation and robotisation with a view to attaining a high degree of production efficiency and quality control.

"However, the pursuit of production efficiency such as practised at Japanese factories is often alien and still uncommon in Europe and the United States, posing a threat to accepted management-labour norms."

It is worth remembering that Japanese and developed Western economies are still discovering each other. The same writer, earlier in his article, speaks of Japanese investment abroad entering the "maturity stage," with returns on investment abroad on the increase.

The relative immaturity of investment in the U.S. and Europe is borne out by the fact that of the $13.9bn invested in the U.S. since 1952, 30 per cent has been made in the past two years; of the accumulated $6.1bn in Western Europe, 27 per cent flowed in during 1981 and 1982.

Asia, however, is another matter. The Japanese know their way around their neighbours, particularly in South East Asia, where cheap labour has provided Japanese parent companies with a stream of raw materials and components for a decade. Excluding a massive $1.8bn invested in an Indonesian LNG project in 1981, only 19 per cent of Japan's $14.5bn investment accumulated in Asia since 1952 has been made in the past two years.

Japanese investors have, however, had their fingers burnt in developing economies that have lapsed into debt, particularly in Latin America, over the past few years.

But perhaps the most telling sign of the approaching maturity of Japan's foreign investment has been the degree of equanimity which greeted last year's 13 per cent slide, to $7.7bn, of overall direct foreign investment from the record level of 1981. Finance Ministry officials expect the level to drop again this year, to around $7bn.

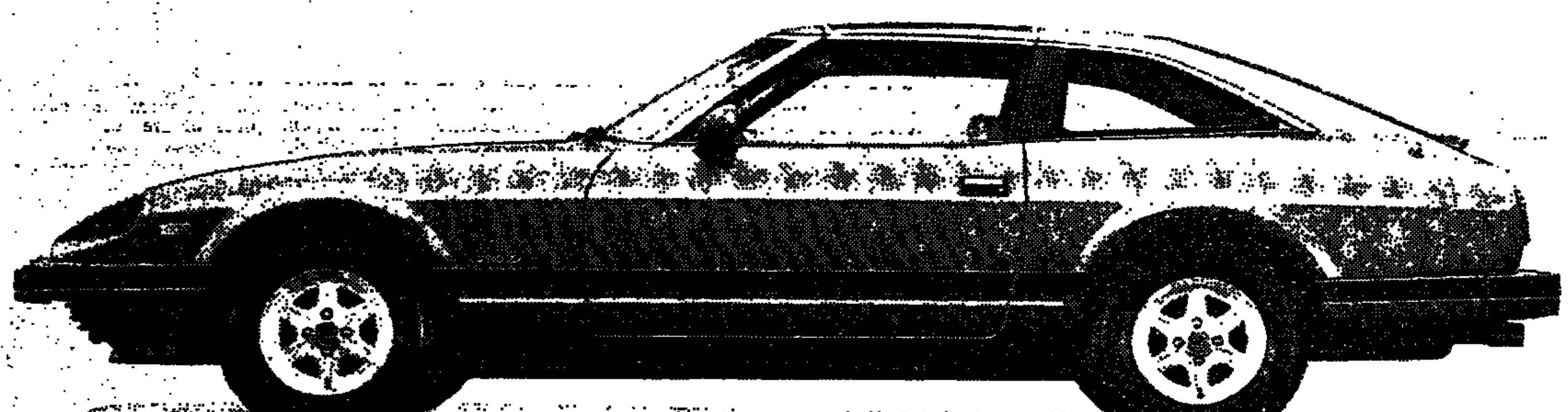
The fall in 1982 surprised no one. The level of investment in 1981, at $8.9bn, was nearly double the $4.7bn of 1980, largely because of the lifting of exchange controls and the Indonesian LNG project.

The fact is, however, that in the space of two years, Japanese foreign investment has been elevated to an entirely new plane.

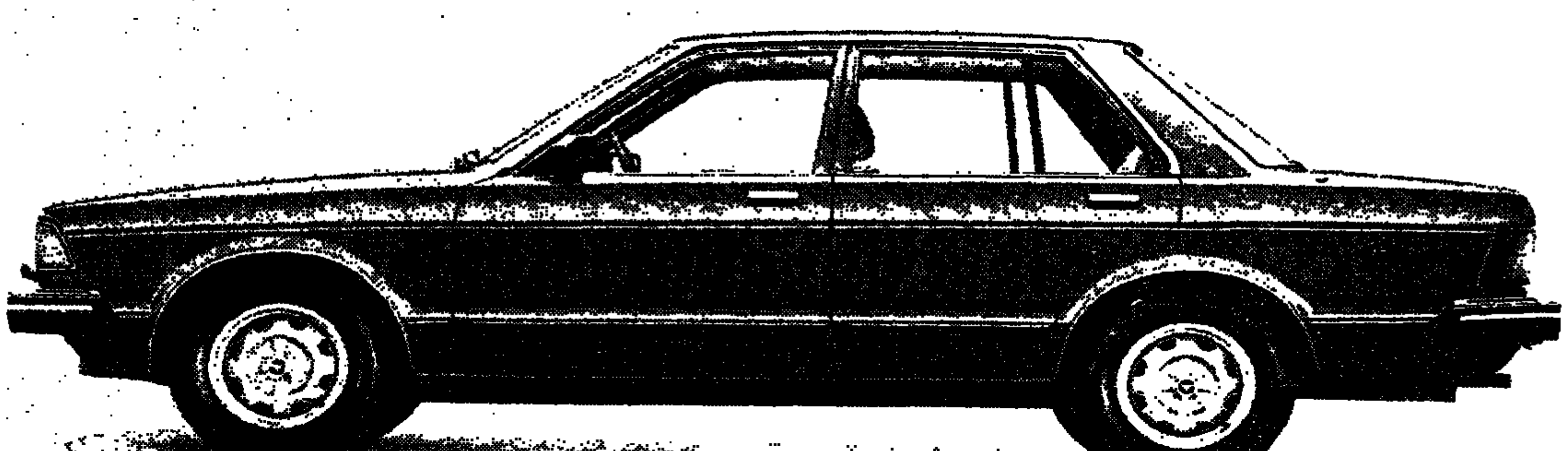
Peter Bruce

DATSUN

A DATSUN IS A NISSAN DEEP DOWN INSIDE



DATSUN 280ZX



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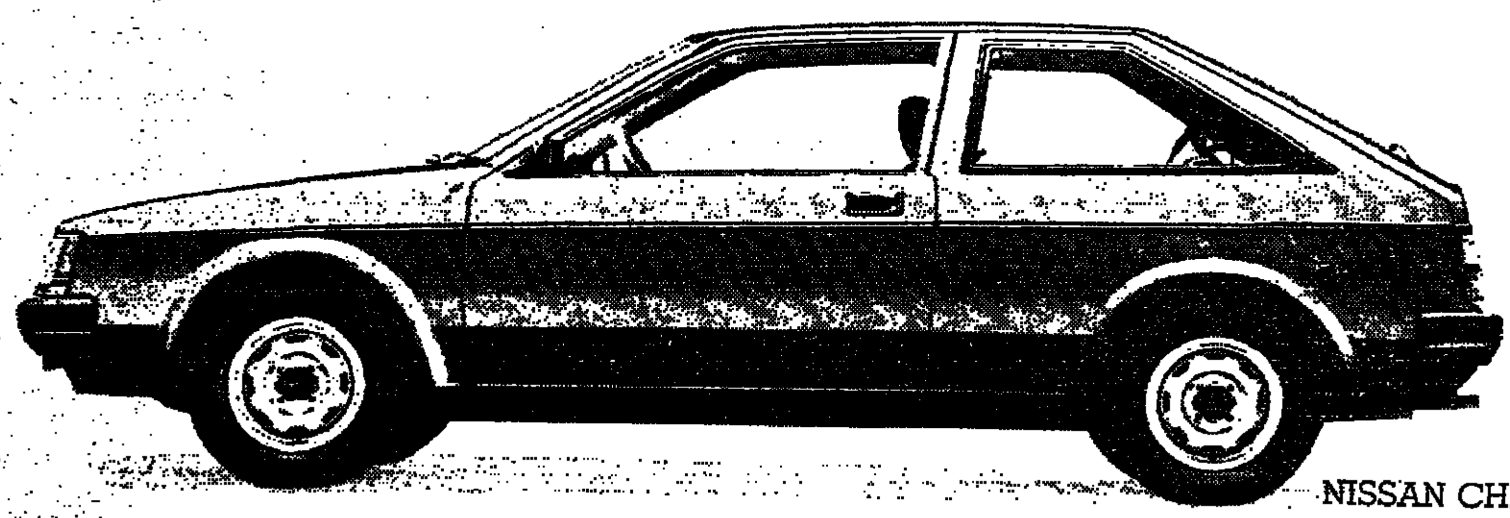


NISSAN CHERRY

It has always been the case. For 50 years now, Datsun cars have been designed and manufactured by Nissan. Spare parts are supplied by Nissan, distributor networks are established by Nissan and, most importantly, Nissan's high technology is built into every Datsun. Just open the bonnet. You'll see more than just a Nissan label on the engine block. You'll see the results of high technology production techniques—Nissan technology. It's the technology that has helped make Nissan one of the world's leading car manufacturers today, enabling us to continually refine our designs and make safer, more economical, more reliable cars—in short, quality cars under the name Nissan.

Perfection from NISSAN Technology

NISSAN NISSAN

New emphasis on imports promotion

JUST BEFORE he retired as Minister of International Trade and Industry this summer, Mr Sadanori Yamanaka described the Japanese consumer as having "a vast stomach" for imported goods. It was up to *foreign nations to fill it, he* stated.

Almost without exception, those same foreign nations complain that they would be only too delighted to oblige but that Japan throws a variety of legislative and social obstacles in their path. Their protests have become loud enough—and trade friction serious enough—that the Japanese Government is now committed to a policy of import *promotion, not only* through a series of previously *announced measures* lowering tariffs and quotas but also in a yet-to-be unveiled package designed actively to assist foreign sellers in the Japanese market.

Nothing the Government does is going to solve the trade imbalance overnight. Japan's trade surplus this year is likely to exceed $30bn. This is because exports are turning up on the recovery in the *global* economy and because imports are falling on lower oil prices (which will cut the import bill by about $6.5bn *this year) and* a depreciating yen (the Economic *Planning agency estimates* that each Y10 depreciation *against the* U.S. dollar results in the loss of $600m of imports in *the* first year and $2.3bn in the second: the Japanese currency has fallen nearly Y20 against the dollar in the last six months).

Perception

There are some big ticket items that could eat into the surplus, such as Alaskan oil (export of which is currently barred under U.S. law) and the purchase of American and European commercial airliners. But, whatever the Government does, it is apparent that a huge gulf in perception persists between Japan and foreign countries over the nature of the Japanese market. This summer the Manufactured Imports Promotion Committee issued a much-trumpeted report which claimed that:

- Nearly 70 per cent of Japanese consumers do not discriminate against imported goods, against only just over a quarter *with chauvinistic* inclination. However, about 60 *per cent of foreign businessmen* are convinced the Japanese do discriminate even when price and availability are comparable.
- A study of the sales in Japan of 24 imported goods showed that although the Japanese distribution system was more complex than elsewhere, in no case was it more complex for foreign than domestic goods and in most instances it was more straightforward than for domestic products. However 78 per cent of foreign businessmen operating in Japan considered Japanese business practices, including the Confucian distribution system, to be "peculiar," while 60 per cent of them thought they should be changed to conform more to international standards.

The report did find the obvious—that would-be exporters to Japan were woefully ignorant of the domestic mar*ket—but was reduced to the* judgment of Solomon when it dispensed advice on the key question of whether a foreign company should employ a sole agent to handle Japanese business or try selling directly to the burgeoning retail trade. Both, it said unhelpfully, had merits and drawbacks.

Packages

Over the last 12 months there is no doubt that the Japanese Government has given escalatingly high attention to import *promotion. There have been at* least three market liberalisation packages, including measures to simplify import procedures. But it is noticeable that each time Japan liberalises something, attention turns to a commodity still under restriction.

The numbers used by both Japan and foreign nations in describing the openness of the Japanese market have reached stupefying and inconclusive, proportions.

However, the U.S., the European Community and, most recently Britain, have long lists of specific actions they feel Japan can and should take.

There is some overlapping: all three have stressed the need *for Japan to make governmental* and quasi-governmental pro*curement more open to foreign* suppliers. The U.S. has continued *to concentrate* on agricultural trade, with minimal success to date, largely because of domestic Japanese political considerations. The EEC is still exercised by the tariffs on sugared biscuits.

The British list, however, has some interesting wrinkles. Rather than simply bemoan the depreciation of the yen, it advocates further liberalisation of the Japanese financial markets (decontrolling interest rates, creating a yen bankers acceptance market and making possible greater foreign access to yen finance).

Japan is moving towards greater *liberalisation* but each step tends to be the subject of fierce *intra-governmental dis*agreement (MITI, reportedly, *likes the idea of a yen bankers'* acceptance market, the Bank of Japan does *not*).

It proposes tax incentives for imports of manufactured goods and for direct foreign investment in Japan including the acquisition of Japanese companies. In fact the quasi-governmental lending agencies have, albeit tentatively, begun to finance foreign-controlled ventures and, it is believed, would like to do more.

More controversially, it suggests that the Japanese Government should discourage Japanese companies from pressing for manufacturing licences but urges them to import directly. Indeed it asks that the Government establish a requirement that companies wishing to manufacture in Japan under foreign licence should tell the authorities in writing why this is preferable to direct imports.

The British Embassy claims that Japanese officials have been much more sympathetic to this list than when an earlier one was circulated three years ago. Indeed, when the next package is announced, it is likely that it will contain plenty of exhortations to the Japanese to "buy foreign" (a sort of "buy *British*" campaign in reverse).

Sensitive

The Government will also enlist business, to the extent it can, to the cause of encouraging imports: import promotion missions have already been to the U.S. and a large one is to visit Europe later this year.

Equally, it is probable that *some additional financial facili*ties will be made available to *importers. But it is too much* to expect that politically sensitive barriers *to trade* will be dismantled at a *stroke* (such as the Tobacco and Salt Monopoly, agricultural quotas etc). Nor can it be expected that the Japanese bureaucracy, which has no equal in meticulous paper-pushing, will easily abandon the work habits of a lifetime in order to hurry through imports on the nod.

The Nakasone Government, after all, had a tough time getting the bureaucracy to accept even the limited reform of import certification and procedures contained in last spring's package.

Nothing the Government does will make a yen's worth of difference if foreign companies remain diffident to the Japanese market. There is an undocumentable, but widespread, belief here that foreign companies simply do not send their best people to work in Japan—or that if they do and if that executive does well in Japan he is promptly promoted either back to head office or to an area where pastures are lusher. Certainly the changeover of foreign executives in Tokyo seems very rapid.

This, in turn explains the niche carved out in the import business by sole agents here, who, over the last 10 years, have accounted for roughly two-thirds of all import contracts.

Many, especially the export trading companies, have expert knowledge, but even the *Japanese* concede that some sit on their contracts and are insufficiently aggressive in either selling or pricing the goods they distribute. British *Ley*land was one company which, *in the last year, thought it* could do better by selling on its *own—and its agent had been* none other than the redoubtable Mitsui.

The changing nature in the *retail trade in Japan, most* notably the emergence of aggressive supermarket and department store chains, and *the still expanding materialism* in an affluent society, more *inclined to use credit* than hitherto, does offer opportunities. The accompanying table showing successful foreign penetration *of the Japanese* market does have a lot of holes in it: *there really is more to* the Japanese market than fountain pens and *mountain climb*ing ropes.

Jurek Martin

IMPORTED GOODS WITH HIGH MARKET SHARE IN JAPAN

Consumer goods		Share
Black tea	Lipton (Britain), Twinings (Britain), etc.	About 60%
Canned soup	Campbell Soup (U.S.)	About 40%
Baby food	Beech Nut California (U.S.)	About 25%
Neckties	Pierre Cardin (France), Austin Reed (Britain), Gucci (Italy), etc.	25-30%
Sportswear	Lacoste (France), Fila (Italy), Ellesse (Italy), etc.	20-30%
Ropes for mountain climbing	Mammut (Switzerland), Interalp (Italy), etc.	About 20%
Paper diapers	Procter & Gamble (U.S.)	About 50%
Instant cameras	Polaroid (U.S.), Kodak (U.S.)	About 85%
Photo films	Kodak (U.S.)	About 20%
Typewriters	Olivetti (Italy), Olympia (West Germany), etc.	About 40%
Skis	Rossignol (France), Kneissl (Austria), K2 (U.S.), etc.	About 30%
Golf clubs	Wilson (U.S.), Spalding (U.S.), etc.	About 25%
Tennis rackets	McGregor (U.S.), Head (U.S.), Wilson (U.S.), etc.	About 25%
Safety razors	Warner-Lambert (U.S.), Gillette (U.S.)	About 80%
Fountain pens	Parker (U.S.), Mont Blanc (W. Germany), etc.	About 35%
Panel heaters	Dimplex (Britain), Coring (U.S.), etc.	About 95%
Capital goods, intermediary goods		
Large-size and super-computers	IBM (U.S.), Univac (U.S.)	About 20%
Turbochargers	Garrett (U.S.)	About 65%
High-speed automatic presses	Minster (U.S.)*	
Bevel gear machines	Gleason Works (U.S.)*	
Maintenance equipment	Plasser & Theurer (Austria)*	
Plasticizers (BBP)	Monsanto Co. (U.S.)	100%

* Their shares are high, because they are specialised machines with *high quality* and high capability.

Export boom under threat

FOREIGN observers of Japan's economic performance can hardly help noting that exports, *rather than domestic demand*, have provided the main thrust *behind such growth as has been* achieved since the 1979 oil shock. The fact that this is so has not escaped the Japanese either.

In a recent paper entitled "Japan's Exports Face a Test," the prestige Industrial Bank of Japan spelled out in remarkable detail the export-oriented nature of Japan's recent economic development and warned against what it saw as some dangers. The Bank concluded by hinting that two major assumptions on which the country's economic strategy *appears to have been founded* in recent years could turn out *to be faulty*.

The first was that western *nations would tolerate an* indefinite continuation of export-led growth by Japan. The second was that "Third World" countries could continue to absorb their present share of Japan's exports.

The ironic aspect of the debate about the export-dependence of Japan's economy is that, by comparison with many western industrial countries Japan has not yet developed a truly export-intensive economic system. The *overseas sector of the Japanese* economy accounted for around 15 per cent of Gross National Product in 1980 or for considerably less than in the UK, West Germany, and a number of smaller European industrial countries.

In terms of per capita exports also Japan continues *to* lag behind many western countries (including the UK). However Japan has almost certainly headed the league of industrial nations in the extent to which the expansion of its economy has depended on export growth during the past few years.

In the two years from mid 1979 to 1981, when the country was attempting to overcome the initial effects of the second oil shock, net exports (for example the surplus of exports over imports) contributed just under three quarters of total GNP growth with the bulk of the *remainder coming from private* capital investment.

HOW THE WORLD TRADE SHARES SHIFTED

(per cent of world exports by volume)

	Japan		U.S.		West Germany	
	1970	1979	1970	1979	1970	1979
Food and drink	1.5	0.6	12.2	14.1	2.5	4.4
Raw materials	1.0	1.0	15.3	18.6	2.8	3.6
Chemicals	5.5	4.7	17.3	14.6	18.5	17.8
Machinery	8.7	13.3	19.9	15.7	17.7	17.5
Other manufactured goods	10.0	8.4	8.5	7.0	11.8	12.4
Total	6.1	6.2	13.6	10.5	10.9	10.4

Source: Industrial Bank of Japan

Since investments by Japanese manufacturers have themselves become increasingly export-oriented in recent years the overall dependence of the economy on exports during the *post oil crisis period may have* been well over 80 per cent of the total real growth of GNP.

Japan's exports fell back sharply in the final quarter of 1981—in part because many industries had accumulated massive unsold inventories in overseas markets during the previous two years. But the world trade "shock" that hit *Japan in late 1981 served* in many ways simply to underline the extent to which the economy had become dependent on exporting.

The first evidence of this fact was a net fall in GNP in the October-December quarter of the same year. During 1982 the economy achieved very modest growth on the strength of domestic consumer demand. But investors who had planned to expand their capacity to meet external demand began a downward revision of their capital *spending* plans with effects that are still visible today.

Japan's 1983 economic recovery—as explained elsewhere *in this survey*—appears to have been sparked off by a revival of overseas demand for Japanese products (chiefly from the U.S.). But doubts exist both inside and outside Japan as to how strong this recovery is likely to be.

One reason *for* caution about the prospects of future export growth for Japan *which* is frequently cited by Japanese economic commentators is the fact that roughly 40 per cent of Japan's exports to the U.S. are *now covered* by restraints of various kinds (including so-called "*voluntary* restraint" exercised by Japan's own export industries).

A second source of Japan's share of world trade, in *machinery* products, has already undergone remarkable expansion at *the* expense of other manufacturing countries.

Japanese exports of machinery accounted for 8.7 per cent of world imports in 1970, a year when the nation was on the threshold of extremely rapid export growth. By 1979 the Japanese share had jumped to 13.3 per cent while the shares of the U.S. and West Germany in world trade in machinery had both declined.

In the *case of the* U.S., exports of machinery accounted for just under 20 *per cent* of world imports in 1970 but for only 15.7 per cent at the end of the decade. West German exports suffered marginal decline in world market share from 17.7 to 17.5 per cent.

If commentators such as the Industrial Bank of Japan are right in supposing that Japan can no longer take for granted an increase in its shares of world trade in machinery the question obviously arises: what next?

One answer to Japan's dilemma would appear *to be* to promote its own imports of manufactured goods much more vigorously than in the past and thus to give western countries the chance of increasing their stakes in the world machinery *industry* by selling—on Japan's own territory.

Two other possibilities include the promotion of western investment in Japan's manufacturing industries and the stepping up of Japanese investment in the west.

In practice it seems likely that all of these approaches to the *defusing of the tensions* caused by rapid Japanese export growth will have to be tried out simultaneously. The only remaining alternative would seem to be slower growth for Japan itself and fewer attractively priced and well designed Japanese products for western consumers.

Charles Smith

Trading companies move to avert decline in profitability

Search for new business

By CHARLES SMITH

JAPAN'S nine big general trading companies (the "sogo shosha") are facing the need to restructure their businesses after many years during which they were seen as a spearhead of the nation's economic development.

One of the problems faced by the shosha has been a gradual decline over the past six to eight years of their once profitable involvement in domestic Japanese trade. The slack has been taken up by exports and imports, and by the fairly rapid growth of third-country trade (meaning trade between countries other than Japan).

However, with the exception of exports, the shoshas have traditionally earned less from their overseas than from their domestic business. Hence the gradual decline in profitability that most of the giant traders have experienced over the past few years — and the vigorous search that many companies are now making for new types of domestic business.

Weakening

Apart from their gradually weakening position within Japan itself the majority of the giant general trading companies have suffered from too close an involvement with sectors of Japanese industry that grew rapidly in the 1960s and early 1970s, but which are now in relative decline. The shoshas traditionally played a major role as exporters of basic industrial …roducts such as steel and petro-…emicals but appear to have …ked the expertise to handle …ne of the newer and more …histicated products that have …n a main source of growth … Japan's exports during the … decade.

… importers the general …ing companies pride them-…s on having had the fore-… to secure access to the …lies of coal, iron ore and …r raw materials needed by …an's basic industries as long as the late 1950s. Japan's …ports of raw materials, how-…r, have ceased to grow …idly—or in some cases have …ually declined quite sharply— … the last few years with the …esult that expertise in these areas no longer does much for trading company profits.

The value of the general trading companies' energy import business — and its contribution to overall turnover — jumped sharply after the 1979 oil crisis by virtue of the simple fact that every barrel of oil brought into the country was costing twice as much as before. Profitability of energy imports, however, is notoriously low so that even the "windfall" of a world oil crisis did not quite serve to restore the shoshas to their former pre-eminence.

The response which the major trading companies have made during the past few years to the decline or stagnation of traditional lines of business has varied from company to company but certain broad patterns can be observed. The main one involves a vigorous — if belated — attempt to get involved with the high-technology and service sectors of the economy, either as importers of know how and equipment or as organisers.

In order to gain entry to the world of high technology several of the leading shoshas have reorganised their departmental structures during the past year, setting up special technology planning groups or extending the terms of reference of existing planning departments.

One example of such a change was the creation by Marubeni Corporation last April of a Corporate Development Department which draws ideas from, and offers suggestions to, the product divisions that make up the rest of the company.

C. Itoh and Company recently made a roughly similar move — when it created a special New Technology Room (shin gijitsu shitsu) to co-ordinate new ventures. At Mitsubishi Corporation, the largest of the nine shoshas, a structural reorganisation carried out in 1982 brought into existence three new planning committees designed to spearhead business diversification.

The sectors into which the shoshas are attempting to move range all the way from such lowly but fast-growing industries as house-to-house parcel delivery services to biotechnology and space development. At Marubeni, a subgroup within the Corporate Development Department that is specifically dedicated to hi-tech projects, has identified six main areas, starting with life sciences and ending with weapons technology, that it plans to explore over the next few years. At C. Itoh heavy emphasis is being placed on electronics, while Mitsubishi admits to a strong interest in medical engineering.

Local cable TV networks, which have yet to appear in Japan, except as a means of improving reception on ordinary TV channels, are a field in which nearly all the big shoshas appear to be interested either as prospective organisers of broadcasting consortia or as partners in software companies.

High Technology

In trying to launch themselves into the fields of high technology and services, the shoshas seem to be painfully aware of two facts that could well limit their success. The first is that less than 10 per cent of executives working for most of the major trading companies have educational qualifications covering the fields of science and engineering. This means that in many instances shoshas may find themselves in the position of amateurs pitted against professionals.

The second point concerns the scale of the shosha's existing business. The nine general trading companies collectively handle an estimated 50-60 per cent of Japan's external trade (although in some cases "handling" may not mean much more than collecting a small commission from transactions for which other companies also share responsibility).

Seen beside their existing transactions the new businesses which the shoshas are seeking to develop risk looking like very small beer indeed. This does not alter the fact that the trading companies have to keep on the move if they are not to be left high and dry by the structural changes taking place elsewhere in Japan's economy.

WHERE BUSINESS COMES FROM

(Percentage of total sales)

	Domestic		Export		Import		Third Country	
	1971	1982	1971	1982	1971	1982	1971	1981
Mitsubishi	57.3	38.9	16.2	18.8	22.3	33.3	4.2	8.5
Mitsui	53.4	42.5	22.9	19.4	20.2	24.1	3.5	14.0
C. Itoh & Co.	58.4	43.5	15.1	18.3	20.1	23.6	6.3	14.6
Marubeni	59.7	36.0	19.3	27.1	18.3	18.9	2.7	18.0
Sumitomo	61.5	50.8	19.2	25.9	16.0	15.3	3.3	8.0

Note: Figures refer to business term ending March 31 each year. Thus "1971" means 12 months ending March 31, 1971.
Source: Nihon Keizai Shimbun.

Mitsui's petrochemical plant in Iwakuni-Ohtake. Shoshas play a major role as exporters of basic industrial products but seem to lack the skill to handle newer, more sophisticated products

Charles Smith reports on the controversial role of MITI

Architects of industrial policy

INDUSTRIAL policy—meaning official guidance and support for industry that cuts across normal market mechanisms—is rapidly emerging as a bone of contention between the U.S. and Japan (to say nothing of the U.S. and certain European countries).

The American view appears to be that Japan has given itself an unfair advantage in world trade by subsidising the development of some industries ("targeting") and by artificially arresting the decline of others. Cast as the villain of the piece is the Ministry of International Trade and Industry (MITI), although an alternative version of the argument holds that what the U.S. really needs to breathe life back into some of its mature or declining industries is a MITI of its own.

According to a former vice-minister of MITI, who is now a special adviser to the ministry, the U.S. is giving both too much and too little credit to the architects of industrial policy in Japan. Mr Naohiro Amaya claims that MITI's power is in decline today and that its influence is seriously overrated by foreigners. He adds, however, that this is largely because Japanese industry has become too competitive to need much help from bureaucrats.

Naohiro Amaya: he thinks MITI's power is over-rated by foreigners.

What Mr Amaya does not deny is that MITI has intervened in the past to resolve problems that the private sector could not have tackled on its own. He also admits that such intervention could become necessary again in future.

The sorts of problems which Amaya sees as fit subjects for industrial policy in Japan include disruptions of normal market mechanisms caused by external events such as the 1973 oil shock; threats posed to the survival of basically viable Japanese industries by foreign competitors enjoying temporary advantages; and the wide variety of "structural" distortions to which the Japanese economy seems to be subject.

Japanese industrial policy was born in the mid 19th century when Japan opted for a policy of developing selected industries with heavy government support to counter western demand for tariff-free access to the domestic market. Its importance has waxed and waned since then but Amaya says the principle on which industrial bureaucrats operate has remained the same: government intervention in industry can only be based on the consent of the private sector, not on a one-way process of bureaucratic interference.

Amaya adds that the worst period in the history of industrial policy-making in Japan came immediately after World War II when MITI enjoyed too much power and was hated and distrusted by private business.

Specific examples of the successful exercise of MITI's power to guide Japanese industry are too numerous to discuss in detail in a short article, but Amaya believes that MITI got into its stride during the 1960s when Japan was faced with the need to undertake its first major round of import liberalisation. Lifting import controls meant a nominal reduction of the powers vested in MITI but the ministry timed the liberalisation measures in such a way as to increase its leverage with the private sector.

Restraints

It repeated the process in the 1970s when the time came to dismantle restraints on incoming direct foreign investment. In both cases the liberalisation had to be made to coincide with the upgrading of technological and quality standards in Japanese industry. MITI co-ordinated this progress by persuading companies in the same industry to acquire western technology in an "orderly" manner (in other words not to engage in a free-for-all fight for foreign know-how).

Amaya says that MITI realised in the late 1960s that the course followed by Japan's industrial development in the first two decades after World War II could not be repeated in the 1970s and 1980s. The change involved reducing the raw materials content and upgrading the added value of industrial products and was enshrined in a vision of the nation's economic future published under MITI's auspices in 1971.

Amaya believes the 1971 Vision set the tone for the remarkable shifts in Japan's economic structure that occurred over the next 10 years. He would probably be the first to agree, however, that the MITI vision set out what, at the time, was the only common sense policy for Japan to follow —and that industry might well have hit upon the same ideas on its own.

Persuasion

One of MITI's main tasks in the period following the second (1979) oil shock has been to persuade some of Japan's more powerful industries to moderate their exports to western markets. (Amaya insists that "persuasion" is the right word here despite the existence of legal powers which could have enabled the ministry to exercise compulsion.)

Another challenge facing MITI has been to reorganise some of the older materials processing industries (aluminium, petrochemicals etc.) whose economic base was destroyed by the quadrupling of oil prices during the 70s.

Amaya's view of industrial restructuring is that declining industries should, in theory, be left to face free market pressures. In practice, however, a hands-off attitude on the part of MITI would simply have opened the way for political intervention, he claims. MITI's recipe for declining industries, which involves a planned capacity scrapping programme combined with some very modest tax incentives, is greatly preferable, Amaya believes, to political inspired protectionism.

Amaya says that the cornerstone of successful industrial policy-making in Japan has been a "correct" relationship between the business world and the bureaucracy. He doubts whether such a relationship exists in the U.S. and is accordingly sceptical about ideas for creating a replica of MITI to organise the regeneration of American industry. Amaya's favourite metaphor for describing how industrial policy works in Japan is that of a water wheel which loses power if it is set too deeply in the stream, or too near the surface. According to Amaya the setting of the Japanese water wheel is just about right.

Policy options boxed in by massive bonds flotation

CONTINUED massive flotation of national bonds to cover large public finance deficit limits Japan's economic policy alternatives and depresses its growth potentials. Total elimination of fresh deficit-covering national bonds from the Government's budget is now expected to take at least seven years to materialise.

The outstanding balance of national bond issues totalled Y102,661bn (US$419bn) at end-July, 1983. The Government is issuing Y13,345bn (US$54bn) of national bonds under the fiscal 1983 national budget, only slightly below Y14,345bn (US$59bn), in fiscal 1982, as a continued tax revenue shortfall of around Y4,000bn (US$16bn) is anticipated.

Large issues of national bonds have kept long-term interest rates in Japan at a relatively high level, with the secondary market yield of 10-year national bonds quoted at slightly above 8 per cent, compared with around 6 per cent during the previous easy money period of 1978-79.

The high level of long-term interest rates in Japan, while short-term rates fell substantially, was also caused by high U.S. interest rates, which attracted Japanese investments in overseas securities and led the yen to depreciate. But anticipation of continued massive flotation of national bonds in the coming years and uncertainty over the prospects of conversion of national bonds in and after 1985 also played a major role.

The high national bond interest rates threaten to disrupt the rigidly-controlled long-term interest structure in Japan, based on the concept that national bonds should pay the lowest coupon rate.

In July, 1982, and February and July, 1983, monthly flotation of national bonds had to be suspended because the Finance Ministry and a syndicate of 33 banks and securities houses were unable to agree on issue terms. The syndicate insisted that it could not underwrite national bonds on issue terms far below the secondary market yield of existing national bonds.

In August, 1983, Minister of International Trade and Industry Sosuke Uno called for a cut in the long-term prime lending rate from its current 8.4 per cent, to encourage Japanese industries to increase capital spending and thus expand domestic demand.

Many Japanese industrialists believe that this will be necessary to shift the emphasis of Japan's economic recovery from growing exports to enlarging domestic demand. Otherwise, they believe Japan will face aggravating trade frictions with western countries where protectionism may gain further ground.

Infrastructure

A cut in the long-term prime lending rate will lead to the lowering of the five-year bank debenture coupon rate of 7.5 per cent under the current interest rate structure, unless the present 0.9 per cent margin for long-term credit banks is reduced.

The position of national bonds as a long-term instrument of investment with the lowest yield is thus in danger. Some city banks are proposing introduction of a medium-term prime lending rate of slightly below 8 per cent for three to five year loans, to replace partly the long-term prime lending rate, which is for loans of up to seven years.

The Japanese Government adopted a new economic programme covering the 1983-90 period, which posted the aim of eliminating fresh flotation of deficit-covering bonds, as distinct from construction bonds for specific social infrastructure projects, by the end of the programme. This will probably mean cutting down the issue of deficit-covering bonds by around Yen 1,000bn (US$4bn) annually.

The programme, which projects an average annual real growth of 4 per cent, says it is desirable to maintain the combined tax and social security burden of the Japanese people at a level below the current prevailing percentage in Western countries, which is believed to be around 50 per cent of national income. This probably means that the Japanese percentage will be raised from the present 30 per cent.

Responding to strong demand from opposition parties, the Japanese Government has indicated that it will introduce legislation for an income tax of around Y1,000bn (US$4bn) in the latter half (October to March) of fiscal 1983. Some economists have been suggesting that the Government should make a larger cut and issue more national bonds to cover the cost, but the Finance *Ministry is sticking to its position* that the tax cut should be financed by increasing other types of taxes or raising off-tax revenue.

Finance Minister Noboru Takeshita last February expressed himself in favour of introducing a VAT-like indirect tax in Japan, but soon retreated from that position, apparently because such a proposal would be politically unwise in the House of Councillors' election held in June. Some bankers still insist that such indirect taxation will be necessary to reduce the deficit-covering bond flotation and legislation should be introduced for that purpose in or after fiscal 1984.

They point out that indirect tax accounted for only 30 per cent of total tax revenue in Japan and assert that this should be raised to 50 per cent.

Another way to stimulate business in Japan has also been blocked, because the Bank of Japan is strongly opposed to a cut in its discount rate from its present 5.5 per cent, which it fears might further depreciate the yen against the U.S. dollar. This would expand exports and thus become self-defeating.

As a means of supporting the Japanese currency some Japanese and U.S. economists have proposed that the Japanese Government should issue dollar bonds in the U.S. market similar to the "Carter bonds" issued as part of the U.S. dollar-defending package in 1978.

Japanese securities sources say the Finance Ministry is unlikely to accept the concept, not only because the U.S. interest rate of around 12 per cent is much higher than the Japanese rate, but also because it would not like to expose government bonds to free market forces.

Instead, the sources say, the ministry is considering allowing government-related organisations, such as the Japan Development Bank, to issue government-guaranteed bonds.

Allocations

The Finance Ministry has just published *estimates for* fiscal 1984 national budget based on requests from government agencies for budgeting allocations. It includes expenditures for national bonds, including interest payment and small amounts of bond redemption, totalling Y10,750bn (U.S.$44bn).

Redemption will increase sharply from fiscal 1985 when 10-year bonds whose issue increased from 1975, will be due for redemption. Total redemption of a construction bond issue will take 60 years, with one-sixth redeemed every 10 years, but deficit-covering bonds, *totalling* Y2,280bn (U.S.$9bn), are due for cash redemption in 1985.

Bankers believe this will pose difficult problems of converting them instead of redemption. This will also raise the question of national bonds nearing maturity competing with bank deposits and work for the further liberalisation of the Japanese capital market.

Japanese banks were allowed from April 1983 to sell national bonds they had subscribed to the public and are expected to deal in the secondary market for them, probably from next year.

This has loosened the line of demarcation between banking and securities operations in Japan introduced after the end of World War Two, copying the U.S. system. Finance Ministry officials say they are considering further diversifying national bond types, which are currently confined to 10-year, five-year, four-year, three-year, and two-year denominations, bringing their issue terms nearer the secondary market

Saburo Matsukawa

High expectations for service sector

ALTHOUGH JAPAN has more than maintained its reputation during the past few years as a competitive manufacturing country it is beginning to look as if the manufacturing sector, as such, no longer holds the key to the growth of the world's third largest industrial economy.

Japan's tertiary sector, a mixed bag which includes retailing, transport and services, now accounts for roughly 60 per cent of GDP and for about 55 per cent of employment compared with just over 50 per cent and slightly more than 47 per cent respectively at the beginning of the 70s.

These figures may not look especially startling given that other advanced nations also seem to be experiencing a shift from goods to services and from the secondary to the tertiary sectors of the economy. However, there are a number of points about the structural change in Japan's economy that seem to call for special attention.

One is the sheer speed with which demand for some types of services seems to have taken off during the past 18 months. A second reason why the growth of Japan's sector seems to deserve more than a passing glance is that Japan's economists are taking the change extremely seriously.

Intensive

Officials at the Ministry of Finance (MOF) which had virtually ignored the sector's existence until the beginning of 1982, have been engaged since the end of last year in an intensive study of the reasons for what has been dubbed the "softnomisation" of the Japanese economy (the expression covers the growth of industries *incorporating a large element* of software as well as services proper).

One conclusion the MoF men already seem certain of is that if Japan's service sector continues to grow as rapidly over the next few years as in 1982-83 there could be some fairly radical changes in the way the economy responds to fiscal and monetary policy.

MOF's studies of the service sector have been handicapped by the fact that most of the existing statistical information that is available on Japanese industry focuses on manufacturing, and on the big companies that dominate the secondary sector of the economy, rather than on the small and medium sized companies that populate the service sector.

Even indices of household consumption fail to give a fair picture of what has recently been happening to the service sector, according to MOF, since they are based on interviews with housewives and thus miss husbands and young unmarried people.

To make up for these deficiencies MOF launched its own detailed inquiry last spring into the sales performance and expectations of 7,000-odd companies chosen to represent the main manufacturing and services industries. The survey showed that non-manufacturing *companies of all kinds expected* a significantly higher sales growth throughout 1983 than manufacturing companies (3.2 per cent as against 2.3 per cent). It also revealed some spectacular sales expectations in particular parts of the service sector.

Sales growth of more than 22 per cent for 1983 was forecast by companies in the leasing, computer services and home food delivery industries (but not by the restaurant industry) while "business services" and "educational services" forecast growth rates of 14 and 16 per cent respectively.

Many of the fastest growing sectors appeared to be related either to the computer and communications revolution fast taking hold of Japan or to changing patterns of daily life.

The services boom, however, also reflects the fact that Japanese consumers seem to be growing tired of the goods-orientated spending patterns that were common in the 1960s and early 1970s. One set of MOF indices shows that expenditure on all kinds of solid goods (including food and clothing) fell from 57.6 per cent of a typical household budget in 1970 to just over 50 per cent a decade later, leaving the balance to be taken up by services.

The growth of demand for services at the expense of goods has been reflected in two very important areas apart from consumer sales during the past year or so, the MOF officials point out.

Investment

The first is that investment in the services sectors of the economy has remained far more vigorous than investment in manufacturing and, indeed, has now reached the point where it has to be regarded as a pillar of economic growth. (Investment by all services industries taken together came to almost exactly the same amount as the combined investment budgets of the steel, motor vehicles and chemicals industries in the final quarter of 1982.) The second important point is that Japan has come to depend on services as its main source of new jobs during the aftermath of the 1979 oil crisis.

The total number of jobs in Japan increased by 1.18m between the end of June 1982 and the same month this year but only about 100,000 of these were in manufacturing, while no fewer than 730,000 new jobs were created in the service sector.

Service sector jobs tend to be predominantly for women and are therefore not much help in curbing the creeping rise in male unemployment that is one of the worries of Japanese economic policy makers.

More female employment however can mean more spending power within the economy as a whole—as well as more demand for the products of the service sector itself from women who are too busy to do as much housework.

Leaving aside the impact of the service sector's growth on Japan's economic performance in 1983, the Ministry of Finance has a number of points to make about the longer term significance of its findings.

The Ministry believes that the shift towards services is part of a broader process of structural change taking place within Japan's economy from the "hard" industries that provided the vehicle for growth in the decades after World War II, to "soft" industries in which know-how is more important than input of raw materials.

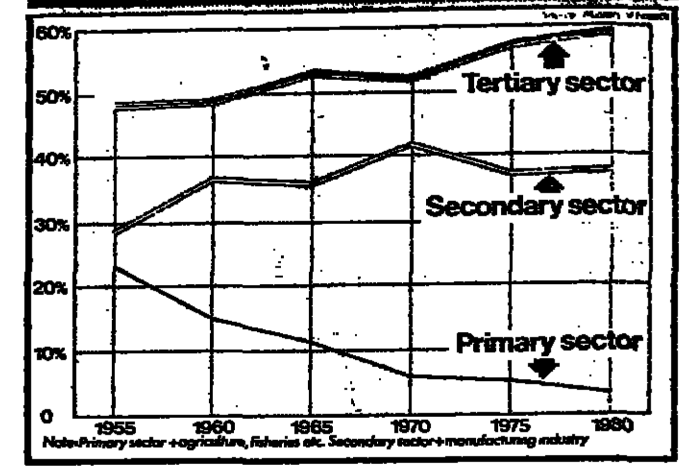
MOF researchers go on to *claim that the macroeconomic* policies appropriate to a predominantly "soft" economy could turn out to be quite different from those that helped the economy to grow after the War.

MOF's conclusions about economic policy are attracting some sceptical comment from other *Japanese ministries (notably* the Ministry of International Trade and Industry) but there seems to be no doubt that the Ministry is right on one point.

Japan's economy would look a lot less buoyant today if a new generation of service industries had not sprung up alongside the mature manufacturing industries.

Charles Smith

HOW THE TERTIARY SECTOR GREW
(of Gross Domestic Product)



Note: Primary sector = agriculture, fisheries etc. Secondary sector = manufacturing industry

WHERE JOBS HAVE COME FROM IN 1983
net year-on-year increase or decrease ('000)

	Jan	Feb	March	April	May	June
Agriculture	60	10	−170	−8	−13	−15
Construction	250	190	−110	−280	−40	20
Manufacturing	−90	60	540	270	100	100
Wholesale and retail trade	60	30	100	200	390	300
Services	770	660	460	850	710	730
Transport	160	100	90	−30	−120	20
Finance, insurance, real estate	−20	−20	60	80	60	100
Other	−10	50	−140	−150	−50	60
Total	1,180	1,060	830	890	920	1,180

Source: Ministry of Finance.

How unemployment is kept low

"FACED WITH recession, management in Europe and the U.S. first considers cutting back on employment. It does not consider reducing dividends because this implies poor management. On the other hand, management in Japan strives to maintain employment even if it *has to* reduce dividends."

Though a little self serving, this contention, published earlier this year by Nikkeiren, the main Japanese employers's federation, is not a million miles wide of the mark. Japan has gone to considerable lengths to minimise unemployment, which still carries some social stigma. The great question now is whether, in a changing economic and demographic structure, the old magic and methods can still work.

There were innumerable reasons for Japan's great success in employing the rapidly expanding post-war labour force. Rapid economic growth was the key and heavy industry the locomotive; the Japanese forsook the land for the factory and evolved, with remarkable speed, into a committed, educated and intelligent workforce: they were rewarded by the giants of Japanese industry and finance increasingly well in pay and benefits and, in many cases, lifetime employment guarantees.

Their unions were based on enterprises, not crafts, and came to identify with the companies in which they were formed rather than with any ideology. The population, still recovering from the ravages of war, was still young and women, by and large, did not work.

Even today the bloom is not entirely off the Japanese rose. Unemployment is still well under 3 per cent, close to a 30 year high but, even allowing for different measurement of statistics, negligible by international standards. And this has been achieved in spite of the fact that economic growth over the last decade has slowed to half the heady levels of the 1960s.

The trade union movement remains ineffectual. Leaving aside the 15.5m self-employed and family workers and at least 5m officially recognised part-time workers, union membership exceeds 12.5m, or just over 30 per cent of the fully employed (a higher percentage, for example, than in the U.S.).

Yet this spring's ritual wage offensive was, for the unions, an acknowledged disaster, bringing less than a 5 per cent wage increase from the major companies and thus, consequently, even less on the national average. The union's political allies in the Socialist and Communist parties suffered equally disastrous local and national election results in the late spring.

But digging not too far beneath the surface unearths some real problems. It demonstrates, for example, that the concept of lifetime employment, never as widespread as often portrayed overseas, is becoming less prevalent. It was, in any case, largely the preserve of the employees of the big companies who could afford it.

Today it is small and medium sized enterprises who employ close to three quarters of the labour force — and it is they who have borne the brunt of the economic slowdown in recent years. The services sector alone accounted for close to 60 per cent, half as many again as 20 years ago.

Vibrant

Though many of the new service industries are economically vibrant, Japan still remains a nation of small shopkeepers and bit players in the distribution and retail trades and it is far from clear how so many of them stay in business —and continue to be able to employ so many people.

As examined elsewhere in this survey, the Japanese labour force is changing both in age (getting rapidly older) and in sex, with women no longer a marginal factor.

The employment consequences are twofold: an ageing workforce is more expensive (wages tend to be based on seniority) and possibly less vital. It is also actuarily lethal to the state pension system.

Secondly a permanent female component in the work force deprives employers of a traditional favourite tool, that of regulating employment levels by hiring and firing women according to economic or other needs.

There are also signs that young Japanese may not match the diligent work habits of their parents. The generation now running private and public Japan was committed, to a remarkable degree, to the cause of rebuilding and then expand*ing the country's wealth* after the devastations of war.

Even if more slowly than their peer groups in America and Europe, their children are beginning to question the value systems they are inheriting. The signs of discontent are still a little diffuse—violence in junior high schools, an inclination to take more holidays by the working young, surveys which point to greater dissatisfaction with society, a small but perceptible decline in university enrolment and thus the shunning of a classical entry into company life—but they could be harbingers of a less cohesive and disciplined labour force.

On the brighter side, they could also supply the creativity and innovative talents that Japan is often said to have permitted to lapse.

More immediately, there is evidence of some changes in Japanese employment patterns and work habits. Under the pressure of economic circumstances, some of the later Japanese companies are transferring employees to subsidiary or client companies in different fields. There is even some inter-industry job swapping (steel workers going to car companies, for example) and some pressure, *for cost* saving purposes, for early retirement (though the national pension problem would be considerably eased by people staying in work even longer).

The five-day work week is also gradually taking hold. According to a recent Labour ministry survey, 49 per cent of 6,000 companies queried had adopted it in some form or other in 1982, up 1.2 per cent over the previous year. This summer, in the first change in banking hours in 55 years, the banks decided to close down for one full weekend a month.

Older Japanese are also taking—or being encouraged to take—slightly longer holidays. On average, a Japanese employee is entitled to 15.1 paid holiday days a year, but takes only 8.7 of them (there are also 12 national holidays a year in Japan).

However, even 8.7 is up on the average of about 5 prevalent not so long ago, when it was often said that the Japanese salaryman was afraid to take a holiday lest he be passed on the corporate ladder by someone more indefatigable.

In 1982, the average Japanese employee worked a seven-hour and 39-minute day (unchanged from the previous year) and a 41-hour and 47-minute week, down by three minutes.

Sophisticated

The impact on the workplace of microelectronics, office automation, and even robotics is still unclear, though Japanese institutions by the *dozen* are studying the subject. Straws in the wind may be provided by both *Sumitomo* Bank, the most technologically sophisticated of the Japanese "city" banks, and Hitachi, no technological slouch, who have both achieved significant labour savings, but no clear pattern has yet been set.

Toyota did enrol some of its robots into the company union, though that may have been no more than an uncharacteristic display of humour.

The challenges and changes in the Japanese labour market do not necessarily mean that the value which the Japanese place on employment and productivity activity is in the process of unravelling fast.

One of the continuing adhesives of Japanese society remains identification with the group, and that is probably more easily attainable in the workplace than anywhere else. This explains why, according to the Labour Ministry, Japan carries on the employment rolls between 2m to 4m people who do not have a real job and why so many companies in the services sector are so patently over-employed (observe the number of white-hatted, white-gloved young women operating fully automatic elevators in department stores and the dinner-jacketed maitre d'hotels, in essentially self-service motorway cafeterias).

It all still works and is a considerable social safety valve.

Jurek Martin

THE NIKKO PERSPECTIVE

ON WHY Japan is Focusing on High Technology

Haruo Nishio, Managing Director of The Nikko Research Center, Ltd., (NRC) provides a perspective on the Japanese focus on high technology. NRC is a research institute affiliated with Nikko Securities.

RECENTLY ***there has been much talk in Japan about the importance of developments in high-technology fields. Just what are these fields, how big are they and how fast are they projected to grow?***

Nishio: The term high technology is being used extremely loosely. Many scientists use it to refer to the next generation of technologies, such as nuclear fusion, which will not be commercialized until the 21st century. For those of us in the investment field, however, its use is confined to those industries that are presently driving economic growth. They include electronics, mechatronics, biotechnology and new materials.

Without a good definition, the question of size becomes problematic. At Nikko Research Center we have estimated the size of seven product areas which fall under the high-technology rubric. They are consumer electronics, office automation equipment, mechatronics, communications systems, life sciences, semiconductors and new materials. In 1982 the total size of these industries in Japan was estimated at slightly more than ¥6,000 billion. Between 1982 and 1987 we project that the average annual growth for these markets will be approximately 19 percent. The range of forecasted growth rates is from 14 percent for life sciences to 32 percent for communications systems.

Another functional way of defining high technology from the investment perspective is to divide Japanese manufacturing companies into three groups: "gram," "kilo" and "ton" companies. The gram group includes many of the industries just mentioned. The kilo group encompasses the automobile, electrical appliance, textile and other industries that led much of the growth in Japan's industrial production during the 1970s. Finally, the ton group covers steel, shipbuilding, construction machinery and other heavy industries.

The trend over the past few years has been for investors to be willing to pay a higher multiple of earnings for the shares of the gram group, a trend justified by the outstanding performance of this group. Since the beginning of 1980, just after the second oil crisis, the average share price of a select group of stocks in the gram group has risen almost five times. During the same period, the kilo group increased over 2.5 times, while the ton group advanced only marginally.

JUST ***why has there been such a strong interest in high technology in Japan recently, and what are the longer-term factors encouraging this interest?***

Nishio: The interest became apparent in the 1970s following the first oil crisis and with the realization that the fast economic growth of the 1960s was coming to an end. There have been three principal factors—technology, resources and markets—motivating the shift to high technology.

First, technology. In the aftermath of the war, Japan faced a wide technological gap between itself and the United States and other industrialized nations. The process of catching up has occurred at a rapid rate, and now Japanese companies find themselves in a position where they must continue to innovate if they are to sustain growth.

Second, resources. The growth of Japan in the 1950s and 1960s was a model case for traditional development theory. During this period, economic expansion closely correlated energy and resource consumption. With large tanker fleets and other facilities, Japan had developed the infrastructure to both import and export in large quantities. But the oil shock made energy and other natural resources both scarcer and more expensive. At that time, companies in many industries perceived a loss of comparative advantage and began to look for means to reduce their dependence on imported resources, while moving quickly to conserve resources.

Third, markets. Japan's economic growth owes much to the growth of demand in export markets, the success in developing superior mass production techniques and the aggressive marketing of Japanese firms. The slower rate of global economic expansion, however, has dampened the pace of growth in Japan's export sectors and forced firms to look for new avenues of growth.

Thus, the current awareness in Japan is that in order to survive and be able to support a large population living in a small area with few natural resources, Japan must become a knowledge-intensive society. This implies a shift in the international division of labor as Japan sheds certain industries. And the perceived imperative to innovate has pushed Japanese firms in the direction of high technology.

WHAT ***effects will this new focus on high technology have on Japanese industry—including the growth, mature and depressed sectors—as well as on Japanese society?***

Nishio: I think Japanese society, and industrial society in general, is in an important period of transition. If we really take a long-term historical perspective, we see society moving from its hunting-gathering origins into an agricultural society and then on into the industrial society we find ourselves in now. With advances in electronics, however, we are on the threshold of an information society. The United States has taken the lead in making this transition, but Japan is not far behind.

Our analysis is that the process will be one in which the availability of information will accelerate the process of technological development. This in turn will open up new markets. To be honest, the process is already occurring at a faster pace than most experts anticipated—and the rate is likely to accelerate.

The implications are that information and new technologies will permeate every industry. Already, Japanese companies in various industries have indicated their commitment to use what experience and expertise they have accumulated to develop new technologies and products. For example, textile firms are developing carbon fibers. Food product companies are among the leaders in the biotechnology field. And firms in all industries are doing research on the implications of electronics for their businesses or even moving into the electronics industry itself.

The ultimate result of this trend will be a blurring of the traditional segmentation of industries. Companies in the kilo group are attempting to move into the gram group. Even firms in the ton group are trying to leap to the gram group, shedding the less profitable parts of their businesses in favor of information-based businesses. In terms most frequently used during the past decade, the move is in the direction of developing higher value-added products. The steel companies, for instance, are doing so with a variety of distinctive products. Some steel firms are even moving into engineering and chemicals. Right now our analysts are looking very closely at company strategies rather than just industry trends.

THERE ***has been much debate over what role government should play in promoting technological development. What is your assessment of the role of government in the high-technology sector in Japan?***

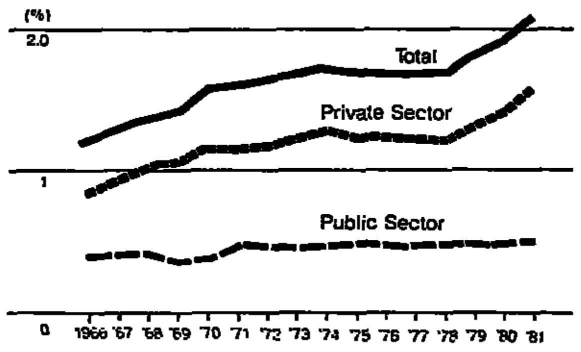
Nishio: This has been a difficult question. Unfortunately, much of the recent debate on the support of high technology—as embodied in the discussion on industrial policy—has drawn on political biases and has not been based on an objective analysis of the facts.

I think the facts in Japan are quite clear. Since the mid-1960s, the government has not had a direct hand in guiding the course of industrial development in Japan. Free competition and the market mechanism have been the basis of economic growth over the past two decades. The role of government agencies—a role that has been frequently misunderstood—has been to facilitate discussion among experts in the academic community and industry. These discussions have been directed at identifying emerging trends and pointing out potential problems facing the economy and society. This has taken the form of various advisory bodies.

In the high-technology area, we are facing a new set of problems. There is still much basic research to be done. Most of it is risky and time-consuming, yet essential for the benefit of both the national and global societies. Thus in Japan, as in other nations, the government is playing a limited role in supporting basic research. The initiative in commercialization, however, is taken totally by the private sector in Japan.

All the data which I have examined points to a much more limited role for government in Japan than in other industrialized nations. In Japan, the government is paying for approximately 30 percent of all research expenditures, excluding defense research, compared with almost half in France. West Germany, the United States and England are in between these two figures. Including defense expenditures, the contrasts are even more marked.

R&D Expenditures/GNP



MANY ***management experts have commented on the long-term perspective from which Japanese management operates. Does this have any particular impact on the way in which Japanese firms proceed with research activities in the high-technology fields?***

Nishio: It certainly does. It means that they tend to increase research and development budgets regardless of where they are in the business cycle. As the accompanying graph indicates, as a percentage of GNP, the private sector in Japan has almost doubled R&D spending over the past 15 years, from 0.84 percent in 1966 to 1.59 percent in 1981. Even at the industry level, most industries have shown a steady uptrend for R&D spending as a percentage of sales.

One crucial component of this commitment to new product development is the ongoing competition for qualified personnel. In a recent survey, 46 percent of corporate managers said they were planning to hire more people with backgrounds in electronics and communications. The runners-up were mechanical engineering and applied chemistry. In many depressed industries, firms are only hiring research personnel.

SINCE ***Japanese firms are already at the leading edge of development in many fields, they are forced to innovate. How do you rate the innovative capabilities of Japanese firms, and what are the factors promoting or inhibiting innovation?***

Nishio: I think the numbers speak for themselves. If, for instance, we look at the balance of payments on technological transactions, Japan is still recording a deficit, but income as a percentage of disbursements has risen from 20 percent in 1971 to 67 percent in 1981. An analysis of new contracts is even more revealing. In 1971 income from new contracts was still less than disbursements, but by 1981 income had risen to 2.8 times disbursements. The clear conclusion is that Japan is an important exporter of technology—a role which I believe Japan will continue to play in the years ahead.

Another revealing set of numbers is patent applications. Over the past decade, the number of patent applications made each year in the United States has remained stable at about 100,000. In the major European nations, there has even been a slight downtrend. But in Japan, the number has gone from roughly the U.S. level to 191,000 in 1980. A significant number of these patents are in such leading edge technologies as optical fibers.

As I mentioned earlier, there are clear historical reasons for the Japanese motivation to innovate. In the process of rebuilding the Japanese economy in the postwar period, there was a severe shortage of engineers and other technical personnel. Many scholarship programs were launched to attract engineering students, and many academic departments and even new universities were established to train them.

At the same time, the emphasis within the natural sciences was different. In Japan it was necessarily focused on the applied rather than the theoretical. I always joke that the one results in patents and the other in Nobel Prizes. Japanese scientists should be aiming for a few more Nobel Prizes, contributing to basic research which will benefit mankind and not just individual corporations. At any rate, it has taken more than 20 years to solve the shortage of technicians, and even now demand is racing ahead of supply.

The telling comparisons are international ones. For the first time, Japan in 1973 graduated more electrical engineers—17,345—from universities than the United States and has remained ahead ever since. Relative to the size of the population, Japan has about as many research personnel as the United States and significantly more than West Germany or France. And as the number I cited earlier would suggest, the best scientific minds in Japan are going into the private sector rather than the defense industry.

WHAT ***implications does the focus on high technology have for the growth of venture businesses in Japan?***

Nishio: There are various institutional factors which suggest that Japan is not likely to experience the type of venture capital boom seen in the United States. There is, nevertheless, substantial room for small companies to grow and entrepreneurs to innovate. My argument is based on the observation that Japan has built an extremely strong base of companies which supply components or specialized pieces of equipment to larger manufacturers and assemblers. These subcontractors are not being left behind in the race to innovate. Many have the capability to accelerate their rates of growth. And the availability of new technologies will create market niches which are best filled by venture businesses.

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JAPAN X

ECONOMY

Main shopping area at East Shinjuku, Tokyo. Direct lending by banks and insurance companies has increased by 30 per cent.

Fresh curbs on loan sharks fail to satisfy

Glyn Genin

Slot-machine parlour in full swing. Many Sarakin borrowers want the money for entertaining or gambling.

JAPAN'S consumer loan industry, which operates outside the scope of traditional banking channels, has expanded remarkably in recent years, bringing in its train a range of serious problems for the consumer loan market as a whole.

The industry now faces distortions and maladies such as managerial difficulties and a sudden upsurge in irrecoverable loans. The industry has to pay a heavy penalty for its hasty expansion achieved through massive build up of heavily indebted borrowers and a consequent train of personal tragedies.

The consumer loan industry currently faces the enactment of a law to restrict consumer loan operators, the so called "Sarakin Law" taking effect from November 1. Companies known as "Sarakin," the abbreviated combination of salaried man and Kinyu (the word for finance in Japanese) provide unsecured, non-specified loans with interest rates up to a legal maximum of 109.5 per cent per annum.

In view of the public outcry against the Sarakins' unscrupulous debt collection tactics, driving many borrowers to family suicide, ruin and crimes, the Government finally decided to impose a legal framework of control on the Sarakin system in April this year.

The Sarakin regulation law calls for lowering the lending rate ceiling to 73 per cent per annum. The ceiling will be reduced further to 54 per cent in three years and to 40 per cent eventually.

The law, however, has brought no upheaval for Sarakin operators, because it is full of loopholes and defects, at least according to the National Consultative Committee on Consumers' Finance Problems.

The committee voiced dissatisfaction saying, there is no need to allow such a high rate as 73 per cent for a three year grace period, because fierce competition and the incursion of outsiders like retail and service companies into the market, have lowered the interest rate to around 40-50 per cent currently. Also the law does not say when the lending rate will be reduced to the final level of 40 per cent.

The new law, however, stipulates that those persons who have been fined or jailed under criminal law are banned from working in Sarakin for three years as their punishment.

Apparently the new law is designed to prohibit Sarakin from hiring criminal offenders in collecting late payments. Sarakin are notorious for their harassment of debtors in collecting late payment, at all hours of day and night, in the debtor's neighbourhood, at work, even embarrassing debtors' children at school.

Daily suicides

Driven into tight corners, some 400 people this year alone committed suicide, making the headlines of newspapers almost every day.

Since anyone can start a finance company merely notifying local authorities after they have opened offices, there are as many as 190,000 consumer loan companies in Japan, of which 40,000-50,000 are believed to be unscrupulous Sarakin operators, charging interest rates of 70 per cent and over and some almost as high as 100 per cent.

The new law obliges companies or individuals wishing to start consumer loan business to obtain the approval of prefectural governors.

Explosive growth had been predicted for the Japanese consumer loan market since it had been underdeveloped for a long time because Japanese have traditionally been reluctant to go into debt. They are still the world's most prodigious savers.

The potential growth was suggested in the belief that Japan would follow the similar pattern of the U.S. where buying with credit accounted for nearly 20 per cent of disposal income, against Japan's 5 per cent.

Why have the Japanese banks been staying away from such a lucrative consumer loan market with such high growth potential? They have been hesitant to make consumer loans due to the small scale of business.

Banks are forbidden by law to charge more than 20 per cent interest and high administrative costs are incurred on making and collecting payment.

Sarakin consumer loan business is not any more a minor industry. It has grown to Y2,500bn business in volume of new loans extended in fiscal 1982. In particular, the top four Sarakin consumer loan operators, Takefuji, Promise, Acom, and Lake, boosted the balance of loans 2.2-fold to Y1,185bn at once in a single year to the end of July 1983.

These top four correspond to the level of mutual banks in terms of volume of loans. Their profits equal those of major regional banks. In the number of installation of Cash Dispensers (CD) and Automatic Teller Machine (ATM) they vie with those of top city banks.

The most frequent motive found among borrowers from Sarakin is for entertainment expenses and gambling.

The scarcity of comprehensive credit information to screen chronic debtors sometimes surprises people. In the recent case of a 43-year-old salaried worker who committed suicide with snowballing debts of Y25m from 45 Sarakin companies, the tragedy could perhaps have been prevented if Sarakin operators had access to the information provided by such a system as Japan Bank Data.

The thriving Sarakin business has generated offshoots such as the Shokaiya or Seiriya. Of 45 recent cases of borrowings from Sarakin, 17 loans were made through this new breed called Shokaiya (business of introduction), in most cases former employees of Sarakin companies. These people arrange loans from Sarakin companies for chronic debtors who have been turned down by lenders as questionable.

Shokaiya charge commission as high as 20 per cent of the total amount of loans made.

Seiriya, mostly of gangster background, recruit heavily-indebted customers by newspaper advertisement, conduct a negotiation on behalf of customers with a Sarakin company by threatening tactics to clear customer's debt at 30 per cent of the actual amount of debt owed to the Sarakin company.

Public scrutiny

Infusion of funds from financial institutions such as banks and life insurance companies to Sarakin has attracted increasing public scrutiny. Banks are criticised for being "wholesalers for Sarakin" and for lending to Sarakin.

At the height of the outcry against Sarakin this spring, the Ministry of Finance called banks and other financial institutions to restrain from making massive loans to trouble-making Sarakin moneylenders.

Similar guidance was given to banks in 1978 and as a result, lending to Sarakin came under full sway of foreign banks which were not covered by the guidance. Foreign banks lending to Sarakin accounted for 50-70 per cent of the total fund procured by Sarakin at that time.

LOANS TO SARAKIN BY FINANCIAL INSTITUTIONS (End-March 1983—Y-bn.)

	Direct loans	Composition (per cent)	Indirect loans (through offshoot)	Composition (per cent)
Japanese banks	54.8	10.8	225.7	38.1
Of which:				
City banks	16.5	3.2	91.9	15.5
Local banks	26.2	5.2	24.4	4.1
Long-term trust banks	0.2	0.0	20.2	3.4
Trust banks	11.9	2.3	89.2	15.1
Foreign banks	243.2	47.9	3.6	0.6
Mutual banks	176.3	34.7	15.9	2.7
Credit associations	15.5	3.1	2.6	0.4
Life insurance	8.5	1.7	336.1	56.8
Casualty insurance	9.4	1.9	7.9	1.3
Total	507.7		591.8	

TOP FOUR SARAKIN (End-July 1983 — Takefuji end-June)

	Balance of loans (Ym)	Per cent increase on year	No. of branches	Per cent increase on year
Takefuji	382,435	122.4	475	146.1
Promise	352,611	140.0	482	109.6
Acom	274,777	121.8	488	82.1
Lake	175,317	78.1	479	62.4

However, Japanese banks, with their fund demands from corporations dwindling under recession, began to increase the flow of funds to Sarakin through offshoot companies at the turn of last year.

Direct lending by banks and insurance companies increased by 30 per cent to Y264bn in the half year from September, 1982, to March, 1983, according to the survey conducted by the MOT in June. The balance of direct and indirect loans by Japanese financial institutions such as banks, life insurance companies and foreign banks totalled Y1,099.5bn at the end of March this year. Foreign banks still topped the list of direct lendings with a total of Y243.2bn accounting for about 5 per cent of foreign banks' yen financing.

The credit squeeze by banks and life insurance companies is beginning to take effect on Sarakin business. The balance of loans by the top four Sarakin companies at the end of July rose only by 0.8 per cent over the previous month. If the inflow of funds from financial institutions is to be further tightened, chronic heavy debtors will find difficulty in borrowing from Sarakin to pay back. There will be many default cases from this autumn to the end of this year, it is thought.

The ratio of bad debts to total balance of loans is expected to climb as high as 20 per cent this autumn, against only 3-8 per cent a year ago. The National Consultative Committee on Consumers' Finance assumes there are 400,000-500,000 chronic debtors nationwide.

Most of them are assessed as "white" by Sarakin companies by their most primitive "black" or "white" credit checking system, just because they can pay back by borrowing from other Sarakin operators.

However, if this recycled borrowing should stop, these "white" borrowers are bound to turn to "black," says the committee. There could be 200,000 of these questionable debtors in the Tokyo Metropolitan area alone, according to the committee.

There are moves among major Sarakin companies such as Promise to seek qualitative improvement from quantity by introducing computerised credit checking system from this October.

Foreign consumer finance companies such as Avco, Beneficial or Citicorp, having struggled in Japan's tough markets in the past five years are taking recent moves to stamp out Sarakin, with mixed feelings. They have seen an increasing number of borrowers knocking on their doors in recent months, but as many as 80 per cent of these visitors are those questionable heavy debtors turned down by Sarakin companies.

Public attention is focused on how much effect rather weak Sarakin regulatory laws can make to restore health to Japan's consumer loan market.

Yoko Shibata

The price of excellence may be too high, reports **Barbara Casassus**

Education 'race' under review

JAPAN'S POST-WAR education system is usually revered either as a model of perfection the rest of the world would be wise to emulate, or is castigated as a systematic oppressor of individuality and original thought. Only rarely do views diverge from one of these two extremes.

However, Japan's literacy rate and academic achievements cannot fail to impress. After they have completed compulsory education at the age of 15, about 95 per cent of pupils enter upper secondary school or technical college and more than 37 per cent of upper secondary graduates go on to higher education.

Japan claims a literacy rate of over 99 per cent and widely-publicised tests show that Japanese children have the highest IQs in the world. The effectiveness of the system in producing an educated and strongly-disciplined workforce is generally considered a major factor behind Japan's spectacular economic growth and technological achievements.

The effects may be excellent, but concern is mounting at the price children and the rest of society have to pay. High IQ scores are dismissed by critics as merely proving that the Japanese are better at tests than children of other nations, especially in maths and science, and as stemming directly from the learning-by-rote methods and the "examination hell," which accompanies the stiffly-competitive advance through different stages of the system.

Control

Considering the lack so far of any move to loosen the tight centralised control over education, it is perhaps surprising how many Japanese educators and government officials admit that the system's greatest failure is that it stifles creativity in providing equal opportunity.

The uniformity this breeds is generally acknowledged to be an important cause of the growing violence in lower secondary schools (ages 12 to 15), which developed into a national issue earlier this year after two particularly dramatic incidents captured the local headlines. The extent of lower secondary school violence is believed by some greatly to exceed the cases reported, partly because institutions fear loss of reputation by disclosing a breakdown of discipline.

The spread of delinquency, also blamed on factors ranging from the Japanese tendency to follow their peers' example to dietary deficiencies, is being taken seriously by the authorities and has prompted a number of measures to help schools and the police deal with offenders.

It was cited as one of the reasons behind Prime Minister Nakasone's decision in June to set up a seven-member, top ranking advisory panel to draw up new educational guidelines and submit proposals in a year's time.

Critics view his initiative with scepticism, however, and considered it to be politically motivated in the run-up to the House of Councillors (Upper House) elections, held at the end of June.

Public awareness of the rigours of the system is amply illustrated by the astonishing success of Japan's best-selling book since the war: Totto-chan: A Little Girl at the Window. An unmistakeable attack on Japan's present system, it is an autobiographical account of the early schooldays of foremost television personality, Tetsuko Kuroyanagi, who was expelled from primary school in her first year and was rescued from otherwise inevitable failure by attending a progressive school.

Kuroyanagi is an exception, as a good education at the "right" institutions from primary level through to university is an essential prerequisite for career openings in the most prestigious organisations.

A consequence of this has been the mushrooming of the fabled *juku*, or cram schools, which are absorbing a rising share of fixed household expenditures in an effort to propel children through the examination hell; de facto selection at an increasingly early age and parents' desire to limit the size of their families, in order to give their fewer offspring the best possible education.

A classic example in higher education is the state-run Tokyo University, or Todai, as it is known. Its graduates occupy many top positions in the civil service and industry and, moreover, over 90 per cent of the university's teaching staff are estimated to have studied there.

Gaining entrance to university may be tough, but once a place is secured, a degree at the end is virtually assured. The intervening four years are, therefore, usually enjoyed as a relaxing break between schooldays and the stringent demands of employment.

Despite the preponderance of science and engineering—second only to social science in the number of students enrolled—university studies are geared primarily toward expanding basic education, leaving instruction on practical application to future employers.

Resources

As scientific and technological knowledge increases, more emphasis is expected to be placed on company training schemes, although higher education establishments, especially those offering post-graduate courses, are called upon to form closer links with industry to assist companies lacking adequate resources of their own to train and retrain their personnel.

Nonetheless, it appears that a university career is losing a little of its lustre. Like other developed countries, Japan has a growing problem of graduate underemployment and this is encouraging some youngsters to turn down university places they are offered in favour of attending vocational schools, where they acquire skills and knowledge of immediate and direct use in the workplace.

Although the number of youngsters in education is stabilising and stress is being laid on qualitative improvements in the system, expenditure allocations under the government's austerity budget for fiscal 1983 are just under 1 per cent lower than those of the previous years. Subsidies to private upper secondary schools and universities were cut and fees were raised, but against pressure from the Ministry of Finance, the Ministry of Education won its battle to maintain free textbooks in compulsory education.

The textbook issue, however, goes far beyond the question of who pays the bill and illustrates the strength of central control and the power of the Ministry of Education, which is known for its staunchly conservative approach. Its authority to change passages in texts before they are approved for use in schools created a diplomatic furore with China and South Korea last year, following charges that Japan's military actions before and during the last war had been played down in history books.

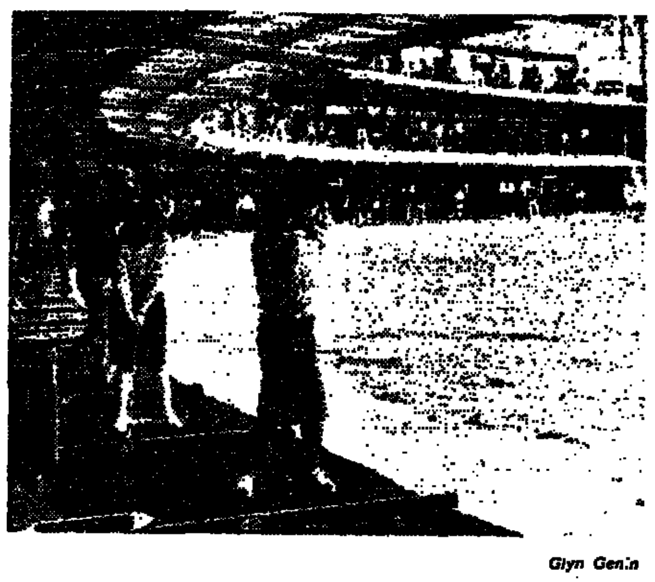
In fact, the controversy dates back many years and, despite government statements issued to placate its neighbours, allegations of further textbook alterations by the Ministry are now being reported.

Internationally, Japan has another problem to deal with. With the expansion of the country's activities abroad, children of the increasing numbers of families expatriated are finding it difficult to reintegrate into the education system when they return, because they are unaccustomed to the methods and in some cases have an inadequate command of the language.

The Ministry of Education recognising the problem has set up special schools to admit these pupils, but even so, the pressures to assimilate or suffer humiliation as "foreigners" are immense.

Many of Japan's educational priorities may be entirely different from those of other industrialised countries, but one development it shares and excels at is the introduction of computers in schools. According to a recent survey conducted by the Ministry of Education one in two state upper secondary schools and one in 50 lower secondary establishments use micro-computers, mainly for maths and computer science studies. Further, there are isolated instances of computers being used in nursery schools.

The impetus for change in education could come from rejection of the system by delinquents, who feel cast out before they have had the chance to prove themselves. But the impact this could have on Japan's noted single-minded efficiency for future generations could be far-reaching, a possibility the authorities will no doubt balance carefully in any move towards reform.



Glyn Genin

Golfers practising at a multi-storey driving range in Tokyo. The Japanese play as hard as they work.

Big spending on leisure

THE JAPANESE spent Y38,313bn, or $162bn enjoying themselves last year. This is 6.9 per cent more than in 1981 and, in turn, more than double the real national economic growth rate for 1982 and about double the expansion in overall consumer expenditures.

Looked at another way, this translates statistically into the fact that each Japanese man, woman and child spent an average of Y327,455 (or $1,336) in 1982 on non-essentials. On a per capita GNP basis that is the equivalent of roughly 13 per cent of income.

The trouble with most statistics—and Japan's are no exception—is that they never quite correlate. Thus, for example, the Leisure Development Centre, a quasi-government institute which keeps track of recreation, does not really consider watching television to be any longer a pastime.

This is presumably because it is now deemed essential, which is a sensible way of looking at things but confusing if not entered into official statistics. There is, for example, little doubt that watching TV is *the* Japanese pastime; 98 per cent of Japanese homes have colour sets against 89 per cent in the U.S. Television is watched by the average family for 8 hours 15 minutes aday (6 hours 43 minutes in the U.S.) and, though corporate Japan shudders to admit it, for 16 weeks of the year TV sets are constantly turned on in offices, for the six sumo wrestling and two high school baseball tournaments. Throw in soaring demand for video cassette recorders, and the national mania is apparent.

Energy

It might be asumed, fancifully, that the Japanese watch so much television because they are so exhausted from their daily productive labours and cannot summon up the energy for anything alse.

Yet in reality the evidence is that the Japanese play as hard as they undoubtedly work — and, for all the national propensity to save as much as 20 per cent of income, they now possess a discretionary spending power of formidable proportions.

Nor are they as tied to the workplace as they used to be: there are 12 national holidays each year in Japan, three of them bunched in "golden week" spanning the end of April and early May, when people often take seven to 10 days off. Similarly, the single New Year's Day holiday can generally be stretched.

The five-day working week is gradually taking hold (even the banks, in the first change in hours in 55 years, now close for a full weekend once a month). On paper, the typical Japanese "salaryman" takes perhaps only a week's holiday a year, but in practice it is becoming much more.

Japanese analysts of leisure patterns furiously dispute the stereo-typical image that, in play as in work, the Japanese do it all in groups. They point to the enduring popularity of traditional pastimes (flower arrangement, tea ceremony and go, the intricate board game) and the growth of sports such as tennis, golf and, latterly wind-surfing, all individual pursuits. Nor, they argue, do the Japanese travel en masse, at home and abroad, as much as they used to.

But a less scientific observer tends to conclude that once the Japanese latch on to what they perceive as a good thing they all want to do it together, at the same time. Hence the phenomenal traffic jams at certain peak travel periods; skiers crammed like sardines into bullet trains, lucky if they get a couple of runs a day so great are the crowds; gold courses easily able to get away with charging $100 a round (the national average is about $45) so insatiable is the demand.

This underlines a second element of the Japanese as leisure consumers. He (and increasingly she) tends not to be price sensitive in the purchase of sporting equipment. The quality and cost of golfing gear (clothes as well as clubs and bags) to be seen on a typical Japanese course is comparable to that of the most affluent American country club. Throughout the leisure sector, brand names, some imported, more domestically produced, acquire the cachet of status symbols.

The apparent growth sectors in Japanese leisure are all costly. Statistics point to significant expansion in overseas travel, skydiving, hang gliding, windsurfing and video film making, all in the top eight most expensive pastimes. Nor is the popularity of golf, the third most costly at an annual average outlay of Y172,000, diminishing in appeal.

It is also becoming more apparent than Japanese demographers care to admit that spending on leisure is being increasingly influenced by wives, and particularly working wives. This is partly because of the control that Japanese wives traditionally have exerted over the family budget: but it also stems from the shifts evident inside Japanese family life.

The conventional "salaryman" is becoming slowly weaned off his traditional regime of working all day, eating and drinking all night with business colleagues and disappearing to the golf course in any free time. He is now more likely to spend at least some time in family activities, particularly if he shares the domestic load with an employed spouse.

This is most evident in Japanese travel patterns, by far the largest single outlay for outdoor activities. Although the single Japanese woman has long been a significant element in the travel business, there are signs that an ever-increasing element in the travelling population consists of the dual-income family. Equally noticeable is the fact that more Japanese women now hold driving licences (39 per cent) than ever before—which the Japanese car industry recognised in its increased output of minicars.

Influence

It used to be that Japanese manufacturers were wary of the female influence on leisure spending because young women, the Leisure Development Centre soberly reported three years ago, were "much the most unreliable and fickle of all consumer groups." Their addiction to tennis, not considered a sport which the Japanese play well, was suspect.

But tennis has endured and expanded and now ranks, in terms of the frequency of participation, after only jogging and cycling among non-traditional, active pastimes.

The overall picture, therefore, is of a catholic, consumer society now having more time and money to lavish on a wide variety of activities than before. Inevitably there are some odd elements. As in the West, film-going is on the decline (with only a third the number of cinemas in the country in 1980 compared with 1960). Yet over a shorter span, 1968-1980, the number of art museums open rose by 70 per cent.

The demand for musical equipment, especially the electronic kind, is up, but the audio market is glutted. Pachinko, a peculiarly mindless form of pinball, remains a minor national addiction, while table tennis, once a Japanese forte, languishes, as does horse racing. There is, in sum, no accounting for taste, not even in homosgenous Japan.

Jurek Martin

Long haul for women's liberation

Glyn Genin

Girls eating in the Ginza district of Tokyo. Japanese women are slowly beginning to look for fulfilment outside the home

ANY WESTERNER to the left of Ronald Reagan is likely to find the lot of Japanese women a bit of a puzzle and even, on *closer inspection, a source of* annoyance and frustration. Few countries, of east or west, north or south, have such an educated, literate and accomplished female population. Yet there are surely no comparable industrialised countries which in both attitude, female as well as male, and in practice make it so hard for women to perform a consequential role outside the home.

There is no disputing that the status quo suits the majority of Japanese of both sexes in what is, for all the trappings and some of the substance of modernity, a traditional society. When Prime Minister Nakasone extols the conventional role of women, as he frequently does, he ripples few waters in Japan.

In spite of some recent exceptions, corporate Japan, with its eye on cost-benefit analysis, agrees with him overwhelmingly: so, according to a government survey this summer, do Japanese women, 71 per cent of whom supported the proposition that "husbands should go to work and wives should stay at home." This compares with 34 per cent of American women, 25.9 per cent of British women and 13.5 per cent of Swedish women who took the same view.

Quiet revolution

But it can also be argued, with increasing statistical evidence, that some kind of quiet revolution in women's roles in Japan is under way of its own volition. In 1972, for example, the proportion of Japanese women agreeing with the above proposition, 83 per cent. Today, for a variety of reasons (better education, self-fulfilment, economic necessity, smaller families etc) more than half Japanese women are engaged in some form of employment outside the home.

More than half Japanese companies have some form of promotion policy for women. There has even been a slight increase over the last decade in managerial opportunities for women, in public and private sectors, and in university graduate hiring.

But the statistics, inevitably, cut both ways. The great majority of women work before marriage (at an average age of 25.3 years) and after the children have passed from direct parental care (45 plus). Career development, therefore, to put it mildly becomes difficult. Sixty per cent of working Japanese women are employed in the wholesale and retail sales sectors and other service industries, but only 5.3 *per cent hold managerial positions.* In the professions, women account for only 6.4 per cent of Japan's scientists, 2.4 per cent of its engineers, 9 per cent of its lawyers (not numerous in a non-litiginous society), 18 per cent of its journalists, and a meagre 0.5 per cent of senior civil service staff.

By contrast, women are well represented in the occupations traditionally reserved for their sex, comprising 70 per cent of the health care labour force, mostly nurses, 61 per cent of those engaged in music, 43 per cent of teachers and 26 per cent of those working in the visual arts. (Yet, as anybody who watches Japanese television quickly discerns, the great majortiy of these perform in conventional female roles as either supplements to the male personality or as stars of programmes overtly aimed at women.)

Inevitably, the question arises as to whether or not Japan is misusing, abusing or underusing a significant proportion of its population. Earlier this summer The Economist argued, with some passion, that "the country is going to need lots more quick-witted office workers if its new "brain intensive" industries are to take over the economic running being surrendered by its flagging heavy industries." The well-educated Japanese woman, it went on, could do for the technological sector what the Japanese peasant did when he forsook the paddy field for the factory.

The qualifications certainly are there and appear to be getting better all the ime. In 1981, 33 per cent of young Japanese women completed college (versus 6.5 per cent in 1961): less than 4 per cent went to work after junior high school in 1981, compared with over 35 per cent 20 years before.

Nor, contrary to the impression given by much of the Japanese popular media, is the non-working Japanese woman principally engaged in a non-stop round of boutiques and tennis clubs. She is ceded principal responsibility for the supervision of children's education. She also runs the family finances. This summer's government survey reported that in 80 per cent of Japanese households wives control the family budget (against 36.5 per cent in the U.S., 32.6 per cent in Britain and 11.5 per cent in West Germany).

Yet for all the satisfaction that probably the majority of Japanese women derive from the conventional role in the home, there is growing evidence that more might be accomplished. After all, the average life span of the Japanese woman is now 79.3 years, nearly half of it after principal child-rearing responsibilities have been relinquished. The growing influx of older women into the labour force, even if much of it is part-time, is just one manifestation of a desire for something else (in cosmopolitan Tokyo, it is ascribed mostly to self-fulfilment; in industrial Osaka to economic need).

Slow response

Yet both government and business remain slow to respond. Although in 1980 Japan signed the UN Convention outlawing discrimination against women, the Diet has still not ratified the action. The Government does make periodic gestures to conform with the Convention. For example, it is proposing that next year the Nationality Law be amended to permit Japanese women to pass on nationality to their offspring (a right currently only granted to men in almost all circumstances).

But it remains terribly slow in changing the labour laws which, even if often honoured only in the breach, have the effect of putting women at a disadvantage in the labour market; and, for all the token appointment of women to government "advisory councils," executive civil service careers are not encouraged (Only last year, for example, were women allowed to sit the exam to become tax inspectors.)

The record of business is little better. Because women have not been seen as a permanent part of the labour force, they have become in effect a reserve, flexible labour pool to be manipulated at a company's discretion.

If, for economic or other reasons, a company wants to reduce the number of its employees it does so often by simply not hiring its regular quota of female graduates.

One leading Japanese bank freely concedes that the labour savings it has produced from computerisation have been achieved by limiting female employment. Similarly, in good economic times, it is easy for a company to take on additional part-time workers, mostly women, and, if necessary, to lay them off later, without having incurred any of the obligations attendant on full or life-time employment.

Again, there are signs of changes, albeit incremental. Some of the big trading companies are hiring young women in career-stream positions. Another Japanese bank is offering priority in employment opportunity to previous women employees who want to return to work after child-rearing. A handful of electronics companies are hiring women as computer programmers, working, if necessary, from home terminals.

But, in a male-dominated society, the road for women has been and remains rough if they wish for an alternative to what society traditionally has required. This probably explains why Japanese feminists have often appeared so strident, certainly in comparison with the deference usually associated with Japanese women.

And, for both sexes, ingrained attitudes still run deep. A close acquaintance in Tokyo, a professional woman of considerable expertise in her field, has been approached several times this year for advice by a very prominent Japanese company. This she has given.

It is remarkable that the company has yet to offer a consultation fee, and it is perhaps even more revealing that the woman herself has yet to summon up the nerve to ask for one.

Jurek Martin

Preparing for the age of the aged

THE SPEED at which Japan's population is ageing is likely to pose problems which the country has yet to find ways of solving, problems which will peak early in the next century.

The phenomenon of an ageing society may be widespread in the industrialised world but nowhere is the socio-economic impact as great as it could be in Japan. It is generally believed the present system of pensions and other social benefits will be able to support the rising number of elderly people until the turn of the century, but planners are aware that in the early part of the next one the burden will become too heavy for the present employment and benefits systems to bear.

As a result of the increase in life expectancy and falling birthrate, the ratio of over 65-year-olds to total population is expected to jump from 9.5 per cent in 1982 to 15.6 per cent in the year 2000 and 21.8 per cent in 2020, when it will exceed the proportion of under-15s, according to government projections.

This will bring the dependency rate of the elderly to the working population—classified as the 15 to 64 age group—from 14.1 in 1982 to 35.5 in 2020. Or, to underscore the burden this will represent, each person of over 65 will then be supported by fewer than three potential members of the workforce, against eight in 1980.

Stark though these figures may be, they presuppose the birthrate will start to rise again in about 1985 and that the percentage of people who never marry will remain fairly stable —assumptions regarded as far from certain by some planners.

Already the effects of the ageing of society, coupled with the Government's attempts to narrow its huge budget deficit, are starting to show. The Welfare Ministry has announced plans to cut health insurance coverage to 80 per cent of medical costs. State pensions are falling behind in real terms and the retirement age is rising in an effort to keep the older generation economically productive.

The government is encouraging the private sector to extend its mandatory retirement age from the present average of about 57 years to 60 by 1985 and some planners expect it to go up to 65 or eventually even to 70.

But this could place too great a strain on company finances for Japan's celebrated seniority based lifetime employment system to survive, at least in its existing form. Apart from the fact older people will account for a larger share of the workforce, the slower pace of economic expansion has flattened the rate of corporate growth, so that companies are unable to create enough senior posts to accommodate their ageing employees.

High salaries

One expert forecasts that the proportion of 45 to 55-year-old university graduates in management posts will plunge from 70 per cent to 30 per cent by the year 2000, when people born in the post-war baby boom reach that age.

In addition, employees, who command high salaries at the time of retirement from their companies, are finding it more difficult to obtain well-paid enough jobs to induce them to work rather than register as unemployed, until they reach state retirement age.

One mitigating factor to the ageing problem in Japan is that significantly more older people work than elsewhere in the developed world, mainly in order to support themselves, so there is consequently less concern about the long-term possibility of a numerically dwindling workforce.

However, there are fears about the effect of ageing manpower on per capita productivity and the repercussions on Japan's competitiveness in vital export markets. In this respect, the further advance of high technology, capital-intensive production methods could well have a positive impact, because of their relatively low dependence on human productivity levels.

Signs of erosion in the lifetime employment system are starting to appear. Some companies are introducing an element of responsibility and ability into their salary structures, rather than basing them exclusively on length of service, and are slowing down pay increases when employees near retirement.

Another aspect beginning to change because of pressures on companies' financial resources is retirement allowances. Traditionally, employees have received lump sum payments, but these are partially being replaced by corporate pension schemes to spread the outlay.

The cost to the working population of supporting their increasingly numerous elders will inevitably rise dramatically, especially compared to the relatively low level of taxes and social insurance contributions paid so far. Under the current system, it is estimated that pension scheme contributions—already accounting for a growing share of fixed personal expenditure—will triple by 2020, when the ageing of society peaks, and that taxes and all social security outgoings will swallow 50 per cent or more of the average pay packet, on a par with Europe now.

Depending on the ultimate mix of state and private pension schemes the proportion of national income represented by the former is predicted to come within the range of 14 to 40 per cent by 2010. At the same time, the cost of medical and health care is expected to swell to 17 per cent of GNP by the year 2000, a mere 3 per cent less than total government expenditure now represents.

It is recognised that greater co-ordination will be necessary between all branches of the medical and health services to ensure that the quality of care does not deteriorate under the weight of increased demand and to preclude abuse of the system because of insufficient controls.

Of major concern to planners is the probability of a further decline in personal savings, which have played an important part in financing government budget deficits. Having fallen steadily since 1974, personal savings still represented a substantial 19.4 per cent of GNP in 1980. But the rate is likely to continue its downward slide as more older people draw on these funds to help support themselves and, as the working population, faced by escalating social contributions, spend more of their income to maintain their standard of living and count on the state and other sources to provide for them in old age.

According to some experts, the major cause of Japan's ageing society is the steep drop in the fertility rate. In the chaos after the 1939-45 war, widespread birth control became possible for the first time—mainly by abortion. Since the baby boom of the late 1940s, the trend has been toward smaller families, principally as a result of the breakdown in the traditional multi-generation family unit, and parents' desire to give their children a good education—which can be expensive in Japan's highly competitive exam-oriented system.

The argument that the size of the population should not shrink so far as to reduce appreciably the domestic market, again with consequences for productivity levels, is closely linked to the present debate over proposals to abolish the legally permitted "economic reasons" for abortion, still a major method of birth control.

Personal savings

In effect, by pleading inadequate economic resources, women can now obtain abortion on demand, whereas efficient and side-effect free contraceptives are not readily available.

There are approximately 600,000 abortions reported a year, although the real figure is believed to be as high as 1.5m or 2m. The anti-abortion lobby considers economic reasons are no longer justified in a country with the second largest GNP in the free world; whereas their opponents fear that curbing the right to abortion under present circumstances will deprive women of the choice of whether or not to bear children.

Although conscious of the magnitude of the problems Japan's ageing population poses, planners have more urgent tasks at hand. They consider personal savings will be sufficient to support private investment and the national debt for at least another 15 years. But they stress the need for greater self-reliance at both corporate and individual levels and an assessment of the repercussions of the shift to the service industries, which help create employment, but generate little production.

Barbara Casassus

HOW ENERGY COSTS HAVE RISEN
(as a percentage of total production costs)

	1970	1975	1980
Petrochemicals	23.9	53.3	61.0
Chemical Fertilisers	15.8	25.5	29.5
Chemical Fibres	11.6	14.4	20.9
Synthetic Resins	13.6	28.8	38.8
Ferroalloys	32.6	43.8	53.3
Aluminium Ingots	24.2	40.7	49.1
Paper	12.6	17.2	22.1

Source: Journal of Japanese Trade and Industry ("MITI Journal").

Energy policy aims to cut oil use further

JAPAN'S Ministry of International Trade and Industry recently slashed its projections for the country's future energy consumption yet again. In a revision of the long-term energy supply and demand outlook last year, MITI estimated that the country would need the equivalent of 590m kilolitres of energy in 1990. However, a new forecast, to be finalised later this year, anticipates that Japan will need only 450m to 480m kilolitres of energy then.

Energy conservation, particularly in industry, has been very successful. Falling production in the country's flagging energy-intensive industries, once leading consumers, faced with higher fuel costs and less demand for their products has also contributed to the cut in energy use. Over the past three years energy demand in Japan has shrunk by 3 per cent a year even though the country's GNP has continued to grow at around the same rate.

Industry has made an all-out effort to cut energy use. The real cuts have been in oil consumption. The large integrated steel mills now use virtually no oil having switched to coal where they can and have otherwise generally introduced energy saving measures.

After the massive price rises of the two oil shocks Japan has had plenty of inducement to cut its bills. The value of oil and petroleum products accounts for around 40 per cent of Japan's total imports. The country needs to import about 84 per cent of its energy needs and oil has accounted for a major part of those imports—in fiscal 1973 it accounted for 78 per cent of all energy used. This dropped to around 62 per cent in fiscal 1982.

The two oil crises jolted the Japanese economy. In the short term they affected prices, domestic demand and the balance of payments. Their influence on Japan's industrial structure is still being felt. Will the recent reductions in energy prices have the same profound effect? In the opinion of a Bank of Japan analyst probably not.

He expects the cuts to have a "one shot" rather than a sustained effect on Japanese industry and the economy.

The price cuts earlier this year which brought down the cost of a standard barrel of crude oil to $29 were much smaller than the rises which sparked the upheaval during the '70s, he points out.

Using a formula based on source of oil, BOJ calculates that the reduction means that the import price to Japan per barrel fell during fiscal 1983 by $4.1 or 11.9 per cent from the previous year. This should trim around Y1.3bn off Japan's oil bill this year.

Benefits

There will be benefits in other areas. Domestic prices, already well under control, will rise even more slowly. Business conditions are expected to improve. The GNP is likely to get a boost from the oil price cuts of perhaps 0.2 or 0.3 per cent on top of the official 3.4 per cent Government forecast (usually more of a target than a certainty). While the rise is small it is nonetheless consoling for some observers who feared Japan's recovery was not getting off the ground.

Less welcome may be the cut in Japan's total imports which will give it an even larger surplus, possibly stoking trade friction further. The country is expecting a whopping current account surplus this year. Estimates range from $20bn to $25bn. Next year it could be even larger if the recovery in the U.S. fails to materialise and the yen exchange rate remains weak. The yen's weakness has also weakened the effects of the oil price cuts.

The main savings of the oil price cuts will be kept to the basic industries which buy directly from oil refiners such as the petrochemical companies or electric power companies, says the BOJ.

The oil refiners themselves while paying less for the raw material have seen any gains wiped out by parallel reductions in selling prices. But cheaper raw material costs are not likely to be translated into more jobs opening up but are likely to go into corporate profits, the Bank of Japan expects.

A reduction in oil prices, however small, will lessen the burden of those parts of industry which have been worst affected by price hikes. But the current reduction will at best buy time for long-term adjustments in the basic industries sector — especially for those like aluminium smelters or other metal producers which are in danger of vanishing altogether because of energy costs.

Such industries are expected to continue their decline in favour of others like electronics or fine chemicals in Japan's industrial balance.

The oil price decrease will have negative effects as well. BOJ is anticipating a fall in exports to oil producing countries. In the past few years the oil producers have increased their imports and Japan's share has risen as well. At the time of the first oil crisis only 7 per cent of Japan's exports went to these countries. Last year it had risen to 16 per cent much of that for plant and or machinery. There has also been some decrease on the amount spent by the oil producers in Japan's bond and stock markets.

In the long run the fall in the cost of oil could also weaken efforts to save energy or develop alternative sources, suggests BOJ. However, it points out that investment in energy saving appears to have peaked out already. A recent survey by the Japan Development Bank also supports this. On an industry-wide basis private investment in this area will fall in fiscal 1983 compared to the previous year, particularly in the manufacturing sector, reports JDB. Also energy prices remain high enough to be a continued inducement to cut use.

Substitution

MITI's forecast is likely to become the basis for Japan's official energy policy which aims to cut the dependence on petroleum further. The pace of substitution under the present revised policy will slow somewhat, however. The prime goal of the new plan is to achieve a comfortable balance between security and cost reduction for energy. Oil will remain Japan's most important source of energy.

Nuclear power, coal and liquid natural gas remain the three principal substitutes for oil. In MITI's view nuclear power has the most advantages and by 1990 will provide the equivalent of 48m to 51m kilolitres of energy rising to 74m to 79m kilolitres five years later.

However Japan must reduce the construction costs of nuclear power plants as well as establish a full fuel cycle to deal with enrichment through to reprocessing, says MITI. The Government is now studying the possible use of Canadian Candu heavy water nuclear reactors in Japan.

The picture is not as bright for LNG or coal use in Japan however. Although the 1990 forecast now estimates that LNG will supply the equivalent of between 60m to 80m kilolitres of energy by 1990 (up from the previous expectations of 68m kilolitres) the longer-term is less promising.

The growth of LNG imports has been slowing down recently. In 1982 around 17.7m tons were imported by Japan.

There are potentially nearly 21m tons more lined up in new projects which could start arriving in Japan in the next few years but it now seems unlikely that all these projects will go ahead.

In the longer-term MITI says it will be difficult after 1995 to introduce any new LNG projects. The generation cost using LNG is higher than other fuels and there is dissatisfaction with the current pricing formulas and take or pay clauses, it says.

Japanese users too are worried about the large tonnage of coal contracted during the past few years. One estimate is that shipments from overseas projects in which Japanese companies are involved could amount to 18m more tonnes annually starting in 1985.

However MITI's current forecast reduces the share of coal in Japan's energy menu from the equivalent of 115m kilolitres to 81m to 86m kilolitres by 1990. Last year it accounted for the equivalent of 72m kilolitres. Some new projects have been postponed and some coal liquefaction schemes cancelled.

The costs of changing over to coal, the problems of handling and storage and the price of meeting the necessary pollution control measures are apparently making potential users hesitate especially with falling oil prices.

Julia Elcock

The darker side of structural change

THE REMARKABLE speed at which Japanese industry has shifted into high technology sectors such as integrated circuits and computers is often pointed to as one of the reasons why the economy has come through two oil shocks in a state of considerably better preservation than those of many western countries. However, there is also a darker side to the process of structural change that has been under way in Japanese industry during the past few years.

The large group of "basic materials" industries that produce such things as petrochemicals, aluminium ingots, paper and chemical fibres is in deep trouble because of sharply rising energy costs, related mainly to the after effects of the 1979 oil shock. The plight of the materials industries has presented the Ministry of International Trade and Industry with a policy dilemma to which solutions are only gradually being worked out.

Before the first oil shock hit Japan in 1973 industries such as petrochemicals and synthetic fibres ranked among the main pillars of the Japanese economy despite the fact that the raw materials as well as the energy inputs needed to operate them were all imported. The energy and raw materials costs of the basic materials industries escalated sharply after 1973, but it was not until after the 1979 oil shock that problems began to build up really seriously.

During 1981 the 40-odd companies making up Japan's petrochemical industry suffered an estimated Y150bn worth of losses while the aluminium refining industry is thought to have been in the red during 1982 by around Y80bn. Declining demand for basic materials from the processing and assembly industries—which had proved all too successful in rationalising their own operations from 1973 onwards—added to the problems presented by high input costs. Yet another aspect of the materials industries woes was the impact of excess competition within each industry on price levels.

Identical

The aluminium refining industry is made up of five separate companies each of which fought hard for market share (in order to raise operating levels and lower overheads) in the difficult period that started in 1979. Since the products being made by each company were essentially identical competition could only take the form of price cutting. This meant that by the end of 1982 the average domestic price for aluminium ingots in Japan was Y300,000 per tonne as compared with production costs of around Y500,000.

Officials of the Ministry of International Trade and Industry who have been saddled with the task of devising a policy for the structurally recessed industries admit that the most logical solution might be to allow market forces to drive them out of existence altogether. Such a solution, however, is ruled out in practice for a number of compelling reasons.

The materials industries tend to play a major role in the economies of some of Japan's less developed regions, which means that their disappearance could cause severe local disruption.

In addition MITI bureaucrats feel that Japan must preserve a certain minimum production capacity in most of the industries concerned so as to be able to bargain with foreign suppliers of industrial materials. A final point is that, although the materials industries are described as "basic" they are important repositories of technology which has a potential spin-off elsewhere in the economy.

As an alternative to standing back and allowing the materials industries to meet their fate MITI has evolved a series of complex restructuring plans for each sector, some of which have already begun to be implemented. The Ministry's plans for petrochemicals starts from the assumption that Japan will need only around 3.6m tonnes of ethylene production capacity in 1985, compared with the current level of 6.2m tonnes (including plants that have already been mothballed).

The plan then goes on to specify production scrapping percentages for each major section of the industry. In its latest and most detailed form the plan indicates how scrapping percentages will be divided up between individual companies.

A second aspect of MITI's plan for petrochemicals encourages company-to-company bargaining on the swapping of capacity cuts in such a way as to make the least efficient or smallest plants in each sector bear the brunt of the rationalisation process while allowing larger and more modern plants to enjoy economies of scale.

MITI sees the swapping of capacity cuts as second best alternative to mergers, which are ruled out in the petrochemicals industries as in most other Japanese industries by the strength of inter-company rivalries. It proposes that companies that undertake more than their allocated shares of cuts should be compensated through cash payments or through the supply of petrochemical materials at a discount by those which take less than their share.

Nationalisation

The MITI plan for petrochemicals, like those for other structually depressed industries, evolved not within the Ministry itself but as the result of a series of hearings by a sub-committee of the Industrial Structure Council, a MITI-affiliated body whose members include businessmen, scholars, journalists and retired officials from other ministries.

The ISC hearings on petrochemicals lasted about two years and involved the publication of two major reports; one setting out the general principles for nationalisation (published in the summer of 1982) and the other setting out numerical targets (published last winter).

Drafting each report was preceded by an intensive bargaining process during which MITI had to make concessions to the industry on issues such as the price of naphtha and on the introduction of short term production cartels (favoured by the industry but originally opposed by MITI).

A final component is the MITI-sponsored Law concerning special measures for structurally depressed industries which was enacted by the Diet during the summer. The law (the second of its kind) provides for designated industries to form capacity scrapping cartels without being considered to have violated the Anti-Monopoly law. It was drafted by MITI after long and hard consultations with the Fair Trade Commission and is believed to be the only piece of legislation of its kind in the world.

The MITI programme for structurally recessed industries means that Japan's materials processing sector will survive in a diminished but more viable form into the second half of the 80s. It also means that the relative weight in the economy for the "process and assembly" industries that consume basic materials but do not produce them will have greatly increased by the end of the decade.

Since the latter industries are the ones that produce goods for export a side effect of "structural adjustment" in Japanese industry will be a greater than ever dependence on overseas markets for the growth or even the survival of the economy.

Charles Smith

JAPAN'S CAR PRODUCTION

	Daihatsu				Fuji			Hino			
	Cars	Trucks	Buses	Total	Cars	Trucks	Total	Cars	Trucks	Buses	Total
1979 ...	133,556	232,171	618	366,345	153,841	180,449	334,290	—	71,248	5,260	76,508
1980 ...	155,604	274,981	1,789	432,374	202,038	223,595	425,633	—	69,003	5,887	74,890
1981 ...	147,219	323,625	1,410	472,254	190,451	282,188	472,639	—	63,058	6,218	69,276
1982 ...	127,619	335,479	1,147	464,245	201,388	312,118	513,506	—	56,436	5,049	61,485

	Nissan				Suzuki			Toyo Kogyo			
	Cars	Trucks	Buses	Total	Cars	Trucks	Total	Cars	Trucks	Buses	Total
1979 ...	1,738,946	587,441	11,434	2,337,821	69,798	275,137	344,935	647,001	322,482	1,938	971,421
1980 ...	1,940,615	678,646	24,791	2,644,052	87,830	380,853	468,683	736,544	379,517	4,955	1,121,016
1981 ...	1,864,251	688,998	31,039	2,584,288	94,785	484,091	578,876	840,630	331,494	4,484	1,176,608
1982 ...	1,815,792	574,665	17,277	2,407,734	113,881	489,272	603,153	824,247	282,019	3,898	1,110,164

Source: Japan Automobile Manufacturers Association.

Record sales in home car market but exports decline

THEY SELL cars door-to-door in Japan, a practice which began about 30 years ago when the automobile industry was growing out of the ruins of war. Dealers began to expand and recruit young salesmen who found that the great buying public believed that if they were going to part with enough money to buy a car then the least the salesman could do was drive round to the house and persuade them.

The tradition is beginning, slowly, to die. Tokyo showrooms are full of youngsters easing themselves in and out of new cars. They form part of a relatively new market in Japan, customers whose preferences for window shopping will no doubt have to be catered for.

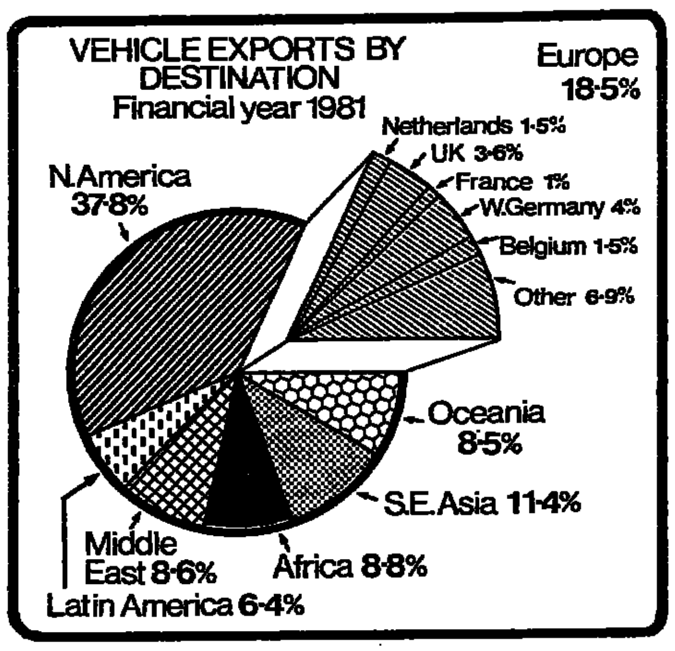
Still, about 90 per cent of all cars sold by Japan's dealers—there are roughly 1,800 main dealerships in the country, each of which employs an average of 200 salesmen—change hands on the doorstep. One Toyota salesman set a new record by selling 65 cars last May.

The dealers are awarded their franchises by the manufacturers and it was about a year ago that Nissan, Japan's second biggest producer, noticed that its dealers were coming under severe presure from rivals working with the industry leader, Toyota. Nissan claims that Toyota's salesmen, spurred by an incentive campaign from the manufacturer, began to undercut them. Nissan salesmen, it appears, found doors increasingly difficult to open.

Nissan believes Toyota is looking for 40 per cent of Japan's car market. "The only way they can achieve that target is by undercutting and the obvious target is us," one Nissan official said.

Toyota certainly improved its sales in Japan last year, by 2 per cent overall, while Nissan's declined by 2.3 per cent. Probably a little too late to affect its share of last year's new registrations, Nissan has begun to fight back. It has also cut prices to dealers, recruited more salesmen and, because it believes that a lack of new models last year also helped give Toyota an edge in the market, plans to put five new vehicles into showrooms this year.

Toyota's Model F "Space Cruiser" in which the space and load-carrying capacity of a van is combined with the handling and equipment found in a good quality car. Introducing new models "is the industry's way of digging up demand"



Production orgy

The Nissan-Toyota rivalry last year tended, as it always does, to mask the machinations among the other big producers in Japan. But it is impossible to escape the fact that by this June Japan was engaged in an orgy of production as manufacturers, partly to compensate for loss of export sales, prepared to introduce a total of 12 new cars on to the market.

Car plants are reportedly working at full capacity, which may be a mild exaggeration. Still, Toyota introduced new designs on all its popular car models to put them on sale in June. Nissan extended its working week and instituted holiday working at all its plants.

Nissan also planned to hire up to 800 extra part-time workers to help it produce 1.27m cars from April to September, 70,000 more than the same period last year.

Workers from slump-hit industries, including shipbuilding and steel,fi are being temporarily seconded to the car makers. Nippon Steel offered workers to Nissan and Isuzu, and Nippon Kokan, the country's second largest steel maker, also sent employees to Nissan. Yamaha, the troubled motorcycle producer, transferred some staff to Toyota.

The increase in production seems in one sense to signal a rediscovery of the domestic market by Japan's automobile industry, which recorded its first ever year-on-year fall in exports last year but found itself making record sales at home.

Domestic sales of vehicles of more than 550 cc rose nearly one per cent to 3.9m units and those below rose 8.5 per ceit to 1.3m. Overall home sales totalled 5.26m vehicles, up 2.6 per cent on 1981.

According to one authoritative report, every Japanese manufacturer plans to increase production this year. The companies are trying to resuscitate what once appeared to be an insatiable fascination in the market for new models. They are aware that the cars on Japanese roads are getting older. In 1975 the average car age was reckoned to be three years and four months but by last March that had risen to four years and five months.

"Introducing new models is the industry's way of digging up demand," explains Mr Toshio Nakamura, managing director of the Japan Automobile Manufacturers' Association, which accounts for the welter of four-wheel drives, sporty compacts, minibuses, turbo and diesel models that have poured onto the market in the past two years.

This new rash of activity has, it appears, yet to peak despite the confident predictions of analysts just a few months ago that the Japanese car market had reached saturation point.

Mr Jiro Shigeta, director of the Japan Automobile Dealers' Association, which represents most big dealers, is in no doubt about his explanation for what, superficially at least, appears to be a contradiction. Why all the activity if the market is saturated? The manufacturers, he maintains, are producing too many cars.

He fears that some dealers, swamped with cars from the manufacturers, may not be able to survive the competition, which has, in some market sectors, completely eroded margins. Late last year at least, there was evidence that two-thirds of Japan's dealers were losing money.

Competition is especially sharp in the small, one-litre market. In the midget car range (around 500 cc) output is also rising rapidly. Production between January and May this year was up 12.3 per cent on the same time last year and industry analysts expect that production forecasts of 1.35m midget cars this year to be exceeded by as much as 200,000 units.

Toyota and Nissan are involved with this market only indirectly, through their links with Diahatsu and Fuji Heavy Industries respectively.

The dealers believe they are, at best, breaking even on sales of cars between 1,000 and 1,500 cc, whereas on an upmarket saloon like Nissan's Cedric, most would clear between 17 per cent and 20 per cent.

It is this disparity, apparently growing, between the profitability in the small market for bigger cars, and the attractions of a high volume, though infinitely less rewarding demand for small cars that might yet encourage some restructuring in the industry if manufacturers try to avoid keeping all their fingers in all the pies.

Trade friction

The intense activity at home only partly masks the frustrations felt in the industry about the spread of export frictions. Exports fell last year to 5.59m vehicles from just over 6m in 1981, down 10 per cent in North America, 5.5 per cent in Europe, and 12.3 per cent in nearby South East Asia.

The most obvious way around the trade frictions with the West has been either to collaborate with competitors abroad, invest in them, or to manufacture in export markets, and the Japanese appear to have settled for a mixture of the three. Toyota, probably the most coy about manufacturing abroad, finally began talks last year with GM about a $200m joint venture to build sub-compact cars in California.

In June, Nissan began producing light trucks from a new plant in Tennessee. Nissan also holds a majority stake in Motor Iberia of Spain and is to sell, and possibly produce, Volkswagen cars in Japan. The company is also to begin joint production with Alfa Romeo in Italy and, of course, is currently agonising about whether to build cars in the UK.

Honda, probably the manufacturer most comfortable about going abroad, began producing sub-compact cars in Ohio last November. It has already licensed BL to produce the Triumph Acclaim and is working on a joint development, the XX, with the UK manufacturers.

Most of the manufacturers are also looking for an increase in sales of knockdown kits (KDs), especially in Asia. "Knockdown kits are probably the only development area left for the Japanese car industry," said a Nissan official.

That may be overly pessimistic. Mr Shigeta, of Jada, believes, for instance, that the domestic market would only begin to stabilise once a new kind of car creates a new kind of demand." It is quite likely that the Japanese are working on it now.

Peter Bruce

New crisis for shipbuilders

JAPAN'S SHIPBUILDERS must be wondering whether the bad fairy ever really went away in 1979 when, for a while, they wallowed in the luxury of an order backlog, firmer prices and a Government-sanctioned cartel. The years since the oil crisis in 1973 had been so bleak that as early as 1976, the Government, in effect, instructed the industry to stop trying to grow.

In 1979 Government and industry took curbs on expansion even further and cut shipbuilding capacity by 35 per cent among the country's 61 producers capable of building ships of more than 5,000 gross tons—from 9.8m CGRT to 6.4 CGRT. The cartel was in business, and the affected yards suddenly found thmeselves operating at more than 50 per cent of their capacity instead of a crippling 39 per cent.

The cartel lasted until March last year, by which time some shipbuilders had notched up healthy profits. The days when gigantic oil tankers seemed to pour out of Japanese yards at a rate—and at prices—which terrified European and U.S. competitors were long gone but the Japanese, it appeared had emerged from their singular crisis with new vitality.

In less than a year, however, the demons have reappeared. Demand is falling too quickly even for Japan's reduced capacity and the South Koreans are snapping up orders from under the nose of their powerful neighbour.

"There are too many shipyards," says Mr Tatsuo Hayashi director of Japan's Ship Exporters Association. But Japan's labour laws make closures almost impossible. Workers cannot be laid off and the industry has developed in such a way as to make some cities totally dependent on the yards.

The Japanese, however, do have ways around the problem. In effect, a new production cartel has been contrived. To avoid having the industry break anti-trust laws and declare its own agreement on new production levels, these have come in the form of a recommendation from the Government after, of course, close consultation with the shipbuilders.

The Government guidelines, which affect 33 of Japan's biggest shipbuilders, put a ceiling on capacity utilisation of 74 per cent. Although many builders are not working at that rate even now, the effect of the guidelines will be to spread more evenly among the yards whatever work is available.

Next year, the ceiling is scheduled to fall to 68 per cent and will probably fall even further unless, as Mr Hayashi points out, the market falls sufficiently to allow the formation of another official cartel without offending fellow shipbuilders in the OECD.

Japan has been rudely shoved into taking this new action. New building orders received for fiscal 1982, which ended last March, were down to 4.85m gross tonnes, 48 per cent less than the year before. Forecasts of capacity levels have also just been sharply cut from those made in the mid to late 1970s—from 4.7m CGRT to 4.1m CGRT for 1983, 5.6m to 3.8m for next year and from 6.4m to 3.2 for 1985.

The new forecasts indicate demand rising from 1986, with capacity then moving up to 3.6m CGRT, to 4.3m in 1987 up to 5.5m in 1990. At best, those figures are guesses and at worst, wishful thinking, for the Koreans have demonstrated a willingness to build ships at prices which the Japanese admit they cannot hope to match.

Early last year three major Japanese producers, Mitsubishi Heavy Industries, Nippon Kokan K.K., and Ishikawajima-Harima Heavy Industries, lost a Y100bn ($410m) order from a European customer to Korea's Hyundai Heavy Industries, which undercut them.

A few months later Ishikawajima-Harima lost a Y20bn order, placed by West Germany's Hapag-Lloyd, to Samsung Shipbuilding in Korea. Towards the end of the year Hyundai again picked up an order from under the noses of Mitsubishi, Hitachi Zozen and Sasebo Heavy Industries. That one was worth an estimated $24m, for eight tankers from India.

The final insult for 1982 came when another Korean yard, Daewoo, won probably the world's biggest order, $770m for 14 container ships from United States Line. The order has

CONTINUED ON NEXT PAGE

Steel slump forces output to fall again

JAPAN'S MIGHTY steelmakers are taking a close, almost envious, interest in the systematic dissolution of the European steel industry under the guidance of the European Commission.

The envy exists largely because of the relative ease with which their European counterparts seem able to achieve redundancies but Japanese steel producers also seem to be using the European steel crisis to test, from a distance, a theory that in the past three or four years, has become very important to them—that a steel industry can trim its sails without losing its capacity to innovate and compete.

Even if the European cutbacks prove beneficial, there is no possibility of the Japanese applying the lesson directly. Japanese steel workers have been promised a lifetime in work. They cannot be laid off.

Because of that fundamental commitment to its workers, Japan's big five steelmakers, Nippon Steel, Nippon Kokan, Sumitomo Metals, Kawasaki Steel, and Kobe Steel, make no attempt to disguise the fact that their own difficulties at present may be far harder to overcome than those in Europe. At the same time, it is difficult to escape the strong impression that there is a commitment to steel in Japan that is quite without parallel in Europe, or even the U.S.

Hurdle

Japan's steel industry is working now at only 50 per cent of its capacity. Crude steel production dropped below 100m tonnes last year for the first time in 10 years, to 99.5m tonnes from 101.7m tonnes in 1981. The industry expects output to fall again this year, to about 94m tonnes—a far cry from the heady days of 1973 when production reached a record 119.3m tonnes and plants were working at about 85 per cent of their capacity.

Last year's breach of the 100m tonne mark appears to have taken the industry past an important psychological hurdle. "I think the world has changed for them," said one analysts referring to the steel chiefs. Certainly, the collapse in income in 1982 would have been sufficient to terrify even the most complacent of managements.

Pre-tax profit (before special items) at Nippon Steel, the world's biggest producer, with sales of more than double its nearest Japanese rival, plummeted 89 per cent to Y12.4bn ($50.8m). Nippon Kokan (NKK) pre-tax income fell just over 77 per cent to Y16.1bn and Kawasaki Steel's fell 88 per cent to Y8.4bn.

Among the big five producers there were two relative exceptions—Sumitomo Metals and Kobe Steel. At Sumitomo, the world's biggest manufacturer of pipes and tubes, the slump in pre-tax profits was held, if it can be called that, to just over 57 per cent, to end at Y45bn. Kobe slid a mere 61 per cent, to Y11.8bn.

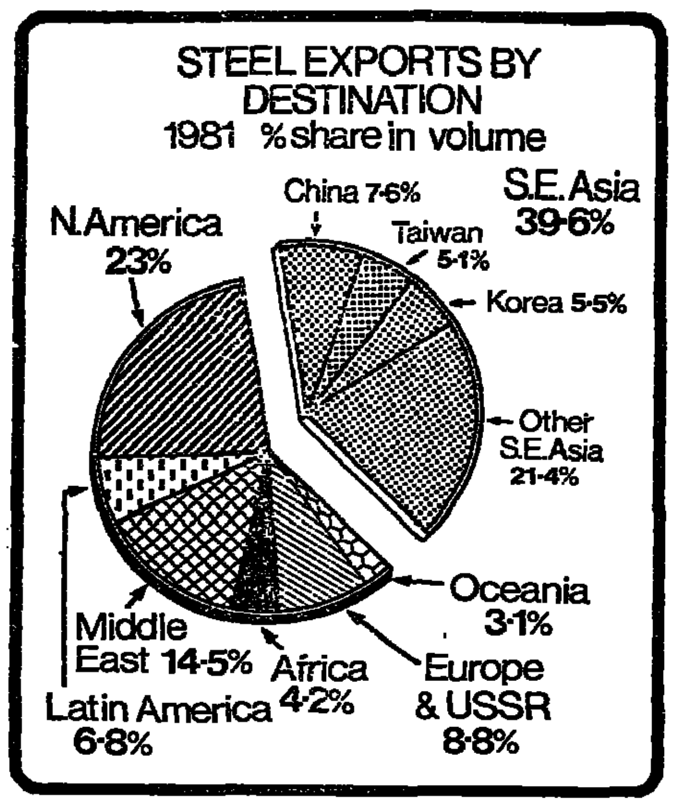
The two steelmakers stand out, however grimly, because it was the collapse last year of the market for seamless pipe, an extremely tough product used chiefly in energy-related roles, that knocked the industry. As the world's biggest seamless pipe supplier, Sumitomo managed to scrape enough orders to keep its volume looking respectable, a result the other producers, less experienced in the market, were unable to match.

Kobe Steel makes no seamless pipe at all and while it did not share in the seamless pipe boom of the past couple of years, it completely sidestepped the slump, succumbing instead to a generally weak steel market and losses on its shipbuilding business.

A year ago, a tonne of seamless pipe, on average, would have sold for about $1,400. Today, following the collapse in world oil prices and dwindling exploration, producers are selling for less than $600 a tonne, in many cases less than what it costs to produce.

The market collapse has been particularly damaging to Kawasaki Steel, probably Japan's most advanced steelmaker. One senior Kawasaki spokesman described the company's predicament as "dire," not least because the seamless slump has caught Kawasaki in the middle of a massive expansion of seamless pipe capacity at its Chiba works just outside Tokyo.

The product contributed about 60 per cent of Kawasaki's income in 1981 and almost all of it in the first half of the year. Now Chiba's two mills are running at less than 50 per cent of capacity.



CAPITAL INVESTMENTS BY STEEL INDUSTRY AND BY ALL INDUSTRIES
(in Ybn)

Fiscal year	Ordinary steel producers	Special steel producers	Others	Total of the steel industry (A)	All industries (B)	Steel industry percentage (A/B)
1976	1,191.7	40.9	32.0	1,264.6	6,241.4	20.3
1977	634.6	23.1	26.4	684.1	6,725.2	10.2
1978	529.3	22.8	28.3	580.5	7,389.9	7.9
1979	563.0	28.7	26.6	618.3	8,035.7	7.7
1980	516.4	55.1	35.2	606.8	9,787.7	6.2
1981	694.8	63.6	44.1	802.5	10,598.8	7.6
1982	917.3	147.7	27.4	1,092.4	11,811.8	9.2

Note: Investments are on a construction basis.
Source: Industrial Structural Council. MITI.

But, unlike their counterparts in Europe and the U.S., the reaction of the Japanese to the weakening of their markets, of which last year represents only a culmination, however spectacular, has been to reaffirm their commitment to the industry and not try to get out of it. "Steel is not a declining industry," insists Mr Torao Okumura, "there is no alternative to it."

Among them, the big five steelmakers are engaged in at least 32 major investment programmes scheduled for completion by 1985 which reflect either their determination to put entirely new products on the market and create demand where there is none, or to modernise facilities to a point where they can absorb fluctuations in the market more comfortably.

For instance, Nippon Steel, is replacing two blast furnaces at its ageing Muroran plant, upgrading two seamless pipe mills at Yawata, and should just have completed a new electro-galvanising line in Nagoya. Kawasaki is upgrading a plate mill, building a continuous chromium coating line and completing modernisation of the seamless pipe mills at Chiba works and modernising sheet and billet processes at its Mizushima works.

At its Fukuyama works, NKK is repairing two blast furnaces, upgrading a plate mill and installing a fifth continuous casting machine and at Keihin it is bringing two pipe mills—one seamless and one welded—on stream.

Sumitomo is expanding a blast furnace at Kashima, where it has also just brought a new continuous casting machine into production and is completing a galvanising line. Kobe is repairing a blast furnace and building a continuous caster at Kakogawa works and building a new bar mill at its Kobe works.

However, this activity does not hide the fact, that there is too much steelmaking capacity, estimated at about 145m tonnes if all of Japan's 65 blast furnames were working. Only 39 are. There is little producers can do about the disused plant, except find new uses for it, because of the commitment to jobs.

This has forced steelmakers to cast around for productive new jobs to offer their employees. Spurred by the conviction that even if world steel demand were to return to the highs of the mid-1970s, the entry of new competition has ensured that prices will never be the same, the industry is involved in a massive effort to develop new high-quality, value-added steels. And where products such as titanium, carbon fibres or ceramics threaten to supplant the use of steel in some areas, then the steelmakers are going to get into those markets too.

Imports

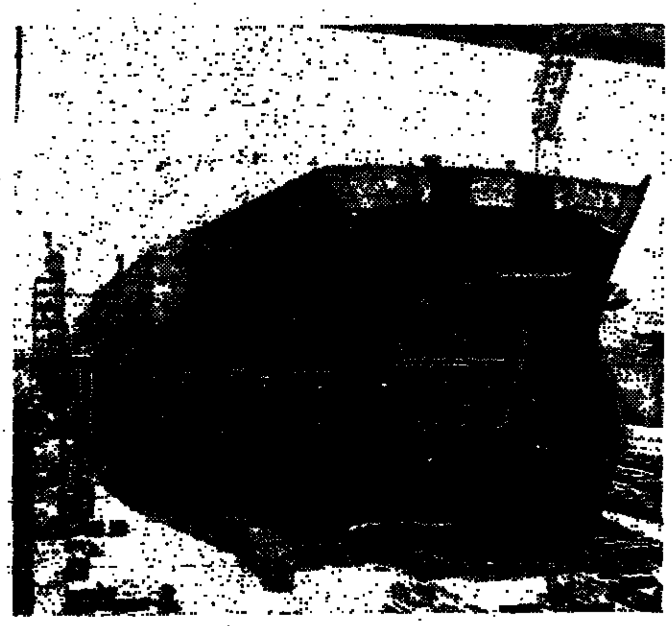
Undoubtedly, there will be a slimming down of the industry. New jobs in steel are hard to find and the steelmakers are not replacing workers who retire. The major producers are also very worried about a seemingly unstoppable rise in imports from South Korea, which have risen from 50,000 tonnes to nearly 2m tonnes in less than six years, and they are continually under attack, particularly in the markets for rod, bar and wire, from fiercely-competitive independent producers in Japan.

The sense of embattlement that hangs over the larger producers is slightly relieved, however, by signs that demand for steel is picking up, or at least, may have stopped falling.

Tokyo brokers are bullish about the companies, particularly as capital investment has hardly been affected by conditions in the market, which should leave the steelmakers more than ready to satisfy new demand, by cuts in raw material costs.

A further cause for optimism is the prospect of China re-entering the steel market. China, in fact, could transform the atmosphere in the industry if estimates that it plans to buy about 5m tonnes of steel this year alone prove correct. Most of it would come from Japan.

Peter Bruce



LPG carrier under construction at the Nagasaki yard of Mitsubishi. Shipbuilders, a major steel user, are working at only half their capacity.

Shipbuilders

CONTINUED FROM PREVIOUS PAGE

been cut slightly, but the Japanese didn't even bother to compete.

The Koreans, operating with labour costs roughly one-third of the Japanese, doubled their share of world shipbuilding orders to 16 per cent in the first half of 1982 and that share is likely to have grown substantially since then. They now rank second in world market share to Japan, whose share slipped from 49.2 per cent in 1981 to 47 in the first half of last year.

A major problem confronting Japan's shipbuilders, or some of the larger ones at least, is that they are diversified into other heavy industries just as prone to over-capacity as shipbuilding itself.

That diversification helped at least one major shipbuilder, Ishikawajima - Harima, boost pre-tax profits (before special items) last year to $87.8m from $83.1m a year before.

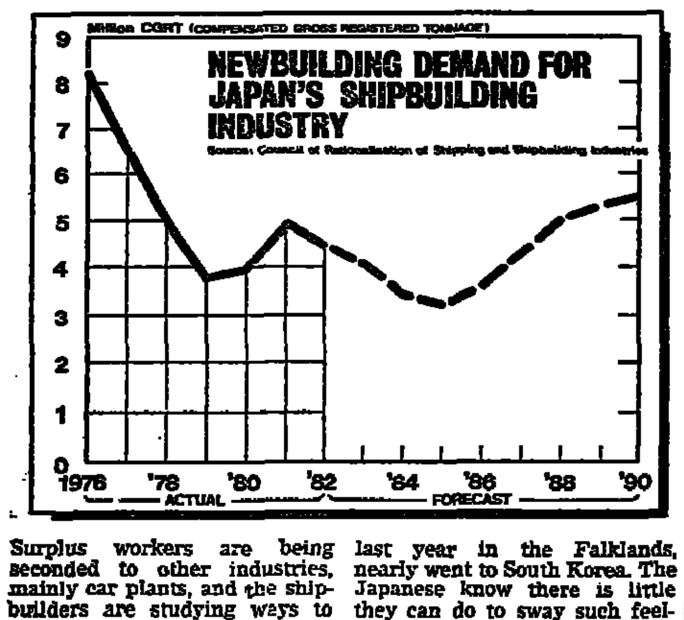
The company owed that performance to an increase in sales of large plant, including thermal and nuclear power plant, but has conceded that the decline in shipbuilding — which normally accounts for between 20 per cent and 30 per cent of its turnover — will catch up and squeeze profits this year.

At the other end of the scale, however, Nippon Kokan's pre-tax profits, (before special items) plunged 77.1 per cent to $67.4m last year. Nippon Kokan is also one of Japan's biggest steel makers and lost out in both of its prime sectors.

Not even orders of nearly 100 bulk carriers, chiefly for Japan's Sankyo Steamship Company, to 13 Japanese yards have been able to lift the gloom in Japanese shipbuilding circles. Amid reports that the orders had been accepted at extremely low margins (if any) there are also worries that the orders will serve only to depress future demand for bulk carriers, which have emerged as one of the fastest growing markets in the past three years.

In 1980 bulk carriers accounted for 52 per cent of Japan's new orders. By 1981, that figure had risen to 74 per cent.

While there is little the Japanes can do about the export market, which traditionally accounts for about 80 per cent of their sales, there has been a scramble throughout the shipbuilding industry to cut costs and introduce new technology.



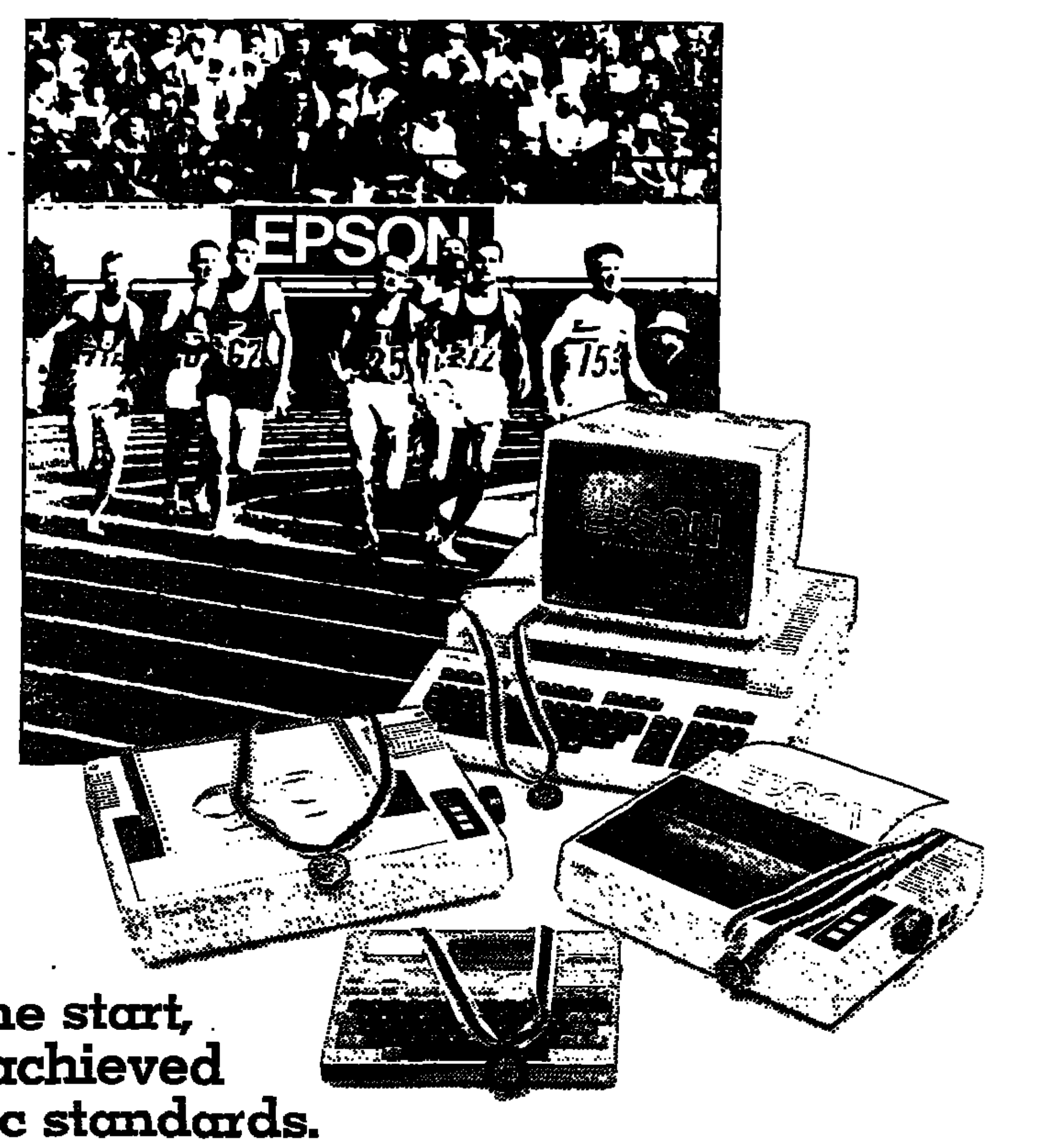
Surplus workers are being seconded to other industries, mainly car plants, and the shipbuilders are studying ways to introduce automation, including robots, into their yards.

Efficiency and a willingness among some shipbuilders, notably Hitachi Zozen, to trim margins, may see the industry through until 1986, but the shipbuilders are also closely monitoring what might be the beginning of protectionist sentiment building up in developed markets.

They were clearly puzzled about the uproar created in Britain when the replacement for the Atlantic Conveyor, lost last year in the Falklands, nearly went to South Korea. The Japanese know there is little they can do to sway such feelings should they take hold, especially during any future recovery, and it worries them.

That doesn't prevent industry spokesmen like Mr Hayashi remaining confident that, ultimately, Japan will continue to be *the* major force in world shipbuilding. "Thirty-five to 80 per cent of the world market share will always be Japanese," he says. Nevertheless, on the downside, that leaves about 12 per cent of the market still to lose.

Peter Bruce



Europe shortening machine tools lead

FOR YEARS the Japanese have treated Europe's big machine tool exhibitions with polite, though increasingly obvious, disdain. Japanese manufacturers make a point of attending—the exhibitions reinforce the clubby atmosphere among machine tool builders around the world—but for the past eight years at least there has been little to learn from the European technology on display.

During those years, the Japanese producers became virtually omnipotent in the machine tools market. They took a lead in the production of numerically controlled (NC) and then computer numerically controlled (CNC) machines. And with a domestic market sufficiently large to encourage them, by 1980 they had created, and were servicing, a demand for machines that the Europeans had not even begun to produce competitively.

Between 1979 and 1980, for instance, exports of Japanese NC machine tools to Europe's most powerful producer, West Germany, jumped 71 per cent to Y18,336m. In the same period exports to the UK rose 56 per cent to Y12,759m; they rose by 236 per cent to France, to Y6,289m; by 319 per cent to Italy, to Y1,066m; by 212 per cent to Belgium, to Y7,658m; by 130 per cent to Sweden, to Y5,456m, and by 242 per cent to Switzerland, to Y2,394m.

Rush

Not even the big U.S. producers escaped the rush to buy Japanese machines, Japan's exports to North America, worth just Y42,020m in 1978, were worth Y158,458m by 1981, with the lowest annual increment during that time being 51 per cent.

In June, however, the Japanese manufacturers returned from the Paris machine tool exhibition expressing open admiration for the European products on display. "The Europeans are working very hard," said Mr Shinshichi Abe, executive director of the Japan Machine Tool Builders' Association. "Their machinery is getting smarter."

The Europeans have learned not a few lessons from their Japanese tormentors. One less obvious point that appears to have been taken is that machine tools need to be marketable, as well as efficient. "Their machines are more colourful than they used to be," Mr Abe noted. And while some European producers have drawn roughly level with the Japanese highly successful technology on CNC machining centres and lathes, and are trying to produce in the volumes that enabled the Japanese to undercut them by up to 40 per cent on price, they appear not to have been left far behind in the development of flexible manufacturing systems. Whether that position can be sustained depends on how successfully European producers are able to persuade local industry to invest in firms.

Japanese admiration for the return to a reasonable degree of competitiveness by European producers is, however, tinged with just a little bitterness, though it is unspoken. The Europeans, especially the West Germans, the UK, France and Italy, have been able to quietly gain lost ground under a gathering cloak of protectionism. At the same time, the Japanese machine tool market has all but collapsed.

Japanese manufacturers are in the grip of probably the worst recession ever to hit their industry. The JMTBA expects both production and exports to be roughly 25 per cent down on last year's. Last year was itself a disastrous year for the Japanese, with output off 8 per cent and exports down 20 per cent as protectionist sentiment took effect in their developed export markets.

Government officials warn that some Japanese manufacturers might not be able to see the year out, particularly those not yet building NC machines and therefore most vulnerable to imports into the country of cheap, knock-down conventional tools from Japan's developing neighbours.

But the leaders in the industry have not been left untouched. Ikegai, a major manufacturer of NC lathes, is in the process of being rescued by a group of financial institutions. Okuma Machinery Works, probably the Japanese producer most respected in the West, had its income halved last year. Wasino, a leading manufacturer of universal lathes, is undergoing financial surgery.

The fact that no major manufacturers have been forced to leave the industry is probably due only to the massive reserves built up since the early 70s, when Japanese machine tools succumbed to their last major demand crises.

The Japanese appear to have been particularly badly hurt by a Government-imposed rise on the floor price of machine tools, at the end of 1982, by roughly 10 per cent. The floor price rise, which forms the basis of an "understanding" on imports restraint that Britain's Machine Tool Trades Association claims to have reached with Japanese producers late last year, was, in fact, the result of pressure from the U.S. which urged successfully that the yen was undervalued and that prices should therefore start from a higher base.

In April 1983, by which time the effect of the floor price rise was thought to take effect, the value of Japanese NC exports to the UK dropped 65 per cent. NC lathes were down by 84 per cent and machining centres by half.

The rise in the floor price, however, has only sharpened the downside curve on exports. In Europe at least, the rot had begun to set in at least a year earlier, partly due to protectionist sentiment but, chiefly, it seems, because of the general economic crisis in the UK and on the continent.

Cutbacks

Although the erosion of exports to Europe does not remotely compare with the scale of Japan's initial swift market penetration, the cutbacks have by any standards been deep. NC exports to West Germany fell 47 per cent last year (having fallen 28 per cent in 1981) Shipments to the UK fell 13 per cent (13 per cent), by 28 per cent (11 per cent) to France, by 45 per cent (having risen 30 per cent in 1981) to Italy, by 15 per cent (6 per cent) to Belgium and by 42 per cent (25 per cent) to Sweden.

The European market, however, consumes less than half of the Japanese machine tools exported to the U.S., where protests at the level of Japanese imports has yet to peak. And unlike the UK, where calls for import restraint were based on the frank admission that the domestic industry was in danger of extinction and where there was little quarrel with the quality of the Japanese product, in the U.S. the Japanese producers are being openly accused of dumping. Between 4,000 and 6,000 Japanese machines are believed to be lying in stock in the U.S., allegedly being sold off at less than half their list price.

The Japanese are both angry and not a little nervous about U.S. reaction to their exports. Government officials say complaints by some U.S. producers are exaggerated. "They pay no regard to the competitiveness of Japanese machine tools," said one.

Perhaps. It seems certain, nevertheless, that the U.S. will move to protect its industry unless the Japanese voluntarily cut exports even further than the drop of 28 per cent to North America last year.

It seems certain too that by the time the Japanese economy picks up sufficiently to encourage a new cycle of domestic machine tool orders — the JMTBA's forecast is for an upturn late this year — that life outside Japan will have changed considerably as far as the exporters are concerned. Given sufficient breathing space, Western manufacturers, and their home markets, are unlikely to remain the soft targets of eight years ago.

Peter Bruce

METAL CUTTING MACHINE TOOLS
(Japanese Yen m)

PRODUCTION

Year	Total T	P/C	Value	P/C	NC Machines No.	Value	P/C	NC Lathe No.	Value	P/C	Machining Centre No.	Value	P/C
1980	275,450	25	682,102	41	22,052	339,422	65	12,007	152,443	55	5,231	111,421	83
1981	316,934	15	851,312	25	25,926	434,066	28	12,133	161,287	6	7,394	165,358	48
1982	291,957	−8	782,392	−8	24,048	420,198	−3	10,298	139,673	−13	6,936	161,688	−2
1983 1-3	64,818	−23	177,042	−19	5,873	102,813	−15	2,002	26,567	−39	1,844	40,228	−14

EXPORTS

Year	Total Value	P/C	NC Machines No.	Value	P/C	NC Lathe No.	Value	P/C	Machining Centre No.	Value	P/C	Europe Value	P/C	North America Value	P/C
1980	269,577	30	9,957	172,756	73	6,592	100,835	66	2,920	61,451	103	70,061	104	113,118	55
1981	310,763	15	11,452	218,970	27	6,613	111,966	11	4,129	95,113	55	61,628	−12	158,458	40
1982	247,576	−20	7,899	163,302	−25	4,382	77,965	−30	3,083	73,091	−23	48,592	−21	114,332	−28
1983 1-3	50,697	−23	1,736	35,222	−30	827	13,957	−48	740	16,624	−22	10,914	−14	20,227	−49

Notes T : in tonnes
P/C : in yearly or periodical changes in percentages, which represent periodical with the previous year.
Source: Ministry of Finance

Technology: changing the formula to profit from research

THE QUESTION most frequently posed about Japan's status as a high-technology powerhouse, is whether the nation can switch successfully from a past heavy dependence upon imported "seed" technology, towards a new role of generating its own breakthrough in basic research.

One might ask in response: does it matter? In an impressively wide range of industries Japan has achieved spectacular commercial successes by the old formula.

First, basic technological information is purchased from the leading foreign companies in the field, the financial outlay being seen as a fundamental element of the overall project investment. (Here it is worth noting that many countries in the West might be found wanting in the simple humility required to adopt such a strategy.)

Secondly, the Japanese examine the technological concept or product in the minutest detail, and attempt to discover the widest possible potential applications of their expensive acquisition.

This total-immersion process frequently produces a wider range of application ideas than those perceived by the original inventor.

Finally the technology is deployed in a wide range of applications, with the crucial emphasis being on "added value." An idea is purchased, stretched and taken that one refined step further, all the while protected by Japan's not so secret insurance policy of "quality control."

Twenty years ago in the motorcycle industry the process led to the arrival on British doorsteps of eye-catching machines with electric starters and flashing indicators; and eventually, of course, to the total collapse of the UK home market.

Experience

More recently the formula has been applied with enormous success in the field of robotics. Not only is Japan now the world's largest producer, it is also gaining experience in a uniquely wide variety of robot applications, which in itself is generating new lines of business.

Kawasaki Heavy Industries Ltd has even announced recently that, in "coals to Newcastle" fashion, it is soon to export robots containing original Japanese technology to Unimation Inc of the U.S., its original source of robotics know-how.

Other examples of the "added value" formula are to be found, in greater or lesser degrees, within nearly all of Japan's key industries.

In a great number of these cases technological superiority in the sense of a basic research lead has had little bearing on the matter of eventual profitability.

However, the Japanese now see that the road ahead cannot remain so smooth. The first problem is that technology is becoming increasingly difficult to buy, because, as one might expect, overseas research leaders have become more wary of the consequences of sharing too many of their secrets.

Foreign companies are also demanding cross-licensing and capital participation, and sometimes impose restrictions on export markets for licensed items.

An example of this latter tendency is to be found in a notable area of Japanese weakness; space-related equipment, where products developed with U.S. technology are subject to a wide range of constraints, including a stipulation that U.S. permission must be granted before exports are made to third countries.

The next problem is that there are fewer areas of technology which can nurture obvious large-scale growth industries as in the past. To add to their difficulties, the Japanese are plagued by the successes of the NIC (Newly Industrialised Countries) which are coming up from behind by imitating the Japanese's own strategy and exerting often unwelcome pressure upon Japan to itself provide "seed" technology.

The Japanese are not unprepared as they confront what appears to be a strategic crossroads.

In fact, the perception of the gravity of the problem probably has a more pessimistic shading in the West than in Japan itself. The reading of the situation depends in large measure upon one's evaluation of the Japanese as innovators. A popular Western view is that Japan's progress in high-technology fields has come, in large measure, from massive government funding of targeted research objectives.

Yet government funding of R and D expenditure has in fact been consistently lower than that in the U.S. and Europe. Public sector funding of R and D, excluding defence-related expenditures, stood at 25.4 per cent in 1980, while the comparable figure in the U.S. was 33.2 per cent, in West Germany (1979) 43.6 per cent and in the UK (1978) 31.6 per cent. In 1980 Japan ranked third worldwide in terms of overall R and D expenditure totals.

Japan's trade in technology also balances in a somewhat unexpected way, the country having been a net exporter since 1972. The ratio of receipts to payments stood at 2.68 in 1980. Measured by the number of patent applications, Japan also fares well. In 1981, 191,645 applications were made within Japan. Within the UK in the same year, the total stood at 20,808.

The main thrust of Japan's assault on international markets has been founded on investments in R and D by Japanese industry itself. Examples of the high level of private investment abound, but perhaps most striking are the outlays in the electronics industries.

NEC, an industry leader, invested a massive 10.7 per cent of sales in 1982, while most of its competitors set aside at least 5 per cent on average.

Guidance

The Government's role has nevertheless been very important, mainly in the provision of sophisticated guidance to industry, and in the subtle use of such devices as tax credits and depreciation to persuade companies to invest in those areas which its analyses of the international marketplace have shown to offer the greatest potential.

Far from being interventionist, the Government has seen to it that the work of innovation has been left to those best equipped to handle it; the managers of individual industries. Probably the least discussed, yet most important factor completing the equation is the fiercely competitive nature of the Japanese home market.

Long before its industrialists think about tackling overseas expansion they first must face the white heat of competition at home. It is within this demanding environment that a nationally shared perception has emerged that for a country whose people, and its economic reserves, are its main resource, the exploitation of technology is of paramount importance in creating new wealth.

Japanese government and industry are also doing some fine public-relations work in conditioning the population to this notion that the country's future depends heavily upon high-tech excellence. Although resistance to the loss of jobs through automation and new technology introduction is emerging, the Japanese continue to display a far more positive and less suspicious attitude towards such change than that found in the West.

Robotics is one of the most recent of many instances where a growth industry is, in its early stages, being stimulated primarily by the intense efforts of a host of domestic companies to capture a place in the home market. And the first line of attack adopted is primarily to "out-innovate" the competition.

Far from being handicapped in this battle, evidence shows the Japanese are growing ever more adept at the task, and are "working backwards" ever further towards strategies aimed at the cultivation of original technologies.

It is true that in terms of human resources, Japan has in the past allowed many of its best fruits to go to waste through lack of suitable encouragement. Japan has its share of geniuses like any nation, but it is only slowly coming to recognise that although the rigorous exam-oriented education system has achieved a remarkable level of general education, it has offered little towards the development of creative excellence.

This failing is further exacerbated by the seniority system in Japanese companies, where promotion comes with age and conformity rather than through individual flair and ability.

Yet it is within the company that specialised training has traditionally been handled, and there are widespread efforts underway to use manpower skills more efficiently and flexibly. Also, despite its "creative" drawbacks, the education system is now turning out at least three times as many graduates of electrical and electronics engineering than that in the UK.

A British Government representative, recently in Tokyo, privately expressed similar sentiments, but added with resignation that, on past form, he thought it unlikely that the opportunities of the moment would be seized.

A wide range of assistance is available for UK companies wishing to establish ties with the Japanese, through such organisations as the British Export Marketing Centre and, very recently, the trail-blazing enterprise of West Midlands County Council, which has set up its own liaison office in Tokyo.

But, with certain noteworthy exceptions, UK companies rarely seem prepared to approach the Japanese market in a sufficiently committed fashion.

Yet, whether viewed from afar or close-up, the perception of Japan as a nation handicapped by an inability to do other than imitate, and improve upon imitation, is a comfortable Western myth long overdue for retirement.

Roy Garner

Software deficiencies check factory automation growth

FACTORY AUTOMATION (FA) is a puzzling term to many people, as one naturally tends to assume that the presence of automation has been a key characteristic of a "factory" virtually since the term's inception. The contemporary usage, however, refers to the introduction of new features into the design of manufacturing operations, which supplement the "hard automation" of the past and serve to improve the overall efficiency of the factory's operation.

The best known of these additions is probably the industrial robot but equally, if not more, important, is the application of a variety of forms of computer control.

This computer-aided manufacture (CAM) has several very simple objectives, all of which centre on the attempt to achieve the greatest level of productivity from the minimum amount of installed base.

By use of CAM control the time during which any given machine is standing idle, awaiting the positioning of a workpiece, is reduced to a minimum, and similarly the amount of raw materials which need to be stockpiled is kept very low. Thus the cycle time for the passage from raw materials right through to finished workpiece will be measured in days, rather than in weeks or months as is usually the case in conventional factories.

Efficient

This reduction of the amount of "work-in-process" allows for a much more efficient operation, and makes possible a high level of control over raw materials purchase and order delivery times.

Taken to its logical conclusion, this trend towards computerisation of operations would facilitate the achievement of a fully-automated, unmanned, manufacturing programme.

However, in most cases the optimum manufacturing configuration will require the retention of a certain amount of hard automation, and also the use of the dextrous skills of human beings.

Additionally, a whole range of new tasks, especially in the fields of monitoring and maintenance, will offer employment opportunities.

It is therefore misleading directly to equate the pursuit of FA with the loss of jobs, though such concerns are both understandable and healthy. Japan's awareness of the need to placate such fears is perhaps best illustrated by a recent deal struck between the management and workers of Nissan Motor Corporation.

This agreement guarantees that in no instance will the introduction of new forms of automation lead to redundancies, and additionally assures that consultations between workers and management will always be held, prior to the introduction of new systems.

Japan's prowess in terms of the number of installed industrial robots, and in the construction of some of the world's most advanced "unmanned factories" has led to the not altogether accurate conception of Japan as a world leader in the automation of its factories. It would be more accurate to class Japan as one of the world's most enthusiastic experimenters in the field.

The installation of flexible manufacturing systems (FMS)

Glyn Genin

A supervisor looks on as robots assemble video cassette recorders at Sanyo Electric's Daito City plant

—which incorporate a variety of types of robot, computerised numerical control (CNC) machines, automatic workpiece transporters and some form of total computer control—have made the names of companies such as Fanuc, Yamazaki and Okuma household words in international engineering circles. Many other companies are taking up their lead, and introducing a degree of FMS operation to their plants. But equipment costs, combined with uncertainties over the optimum system for any given manufacturing enterprise, encourage a cautious approach.

The motivations for the spread of FA are plain, however, and might best be summed up in the word "control."

By slimming down the volume of "work-in-process," a manufacturer is able to increase the efficiency of his use of resources, predict with far greater accuracy when work can be completed, and achieve a greater "added value" per employee. Such tight efficiency allows low production costs, high reliability and prompt delivery, and a general boost in competitiveness, which in turn attracts orders.

There are other less obvious benefits. Such FMS systems win over conventional workplaces in terms of their ability to handle machining operations at a continuous pace, and with consistent quality, with "speed" itself becoming less important than the predictability of the level of product output. FA systems allow the use of moderate machining speeds which enable a reduction in costly tool wear and an increase in accuracy.

The ability, quickly and finely, to "tune" the level of production also has obvious benefits at times of both slack demand, and sudden upturn, of orders.

A further reason for the trend towards FMS systems comes from the marketplace itself. Customers are now demanding a far wider range of products than ever before, and in ever-smaller batches. This makes conventional forms of hard automation too slow and costly to set up. Success in today's markets therefore awaits the manufacturer with the greatest flexibility and adaptability in his operations.

Robots

Fanuc blazed the original FA trail in Japan in 1980, with its Fuji plant, where a mere 100 employees, and computer controlled operations, are achieving a level of output which normally requires a staff of between 500 and 1,000 employees.

The Fuji factory produces several models of robot, electric discharge machines and small machining centres.

At the plant's core are 40 machining centres (MC) and 10 turning centres, and these are supplied with raw workpieces by several battery-operated transporters which move about the factory guided by wires buried in the floor. Loading and unloading of the turning centres is handled by robots, and workpieces are fed into the system on pallets, which are picked up from an "automatic warehouse."

Much of the monitoring is handled by closed-circuit TV cameras mounted on each of the MCs. The key to the smooth operation of the plant lies in the efficient scheduling of the workpieces to be handled, and the appropriate machining to be performed, and for this it relies on the high quality of the computer software and control systems. As these systems are upgraded, ever more automatised operations will become possible.

At present the factory works on three shifts; one unmanned overnight period, when even the lights in the building are turned out and only one supervisor remains on site, and two day shifts, when the staff load the pallets for the approaching night shift, make necessary cutting tool changes and prepare onward computer programmes.

The whole process is controlled on a 30-day master production schedule transmitted from a remote computer in the company's head office.

It is difficult as yet to ascertain how many Japanese companies have introduced some form of FA into their operations. In general, however, makers are first experimenting with localised FA applications on a trial basis, and moving ahead only when they are convinced of the potential cost effectiveness.

The biggest restraint is still the inadequacy of systems control software, and many makers see progress in this area as the essential pre-requisite of more widespread FA use in Japan.

One of the most recent announcements in the FA field came from Toshiba, which says it has adopted as corporate policy the introduction of "flexible automated production systems" into all of its 29 plants in Japan. Toshiba also stresses the importance of a step by step move towards an efficient FA system. Spokesman Masahide Nambu said that the company is in the midst of an eight-year transition period from manual assembly processes towards the final goal of "an unmanned, unattended factory."

Progress in the rationalisation of the company's TV assembly lines has already been impressive. In 1976, 2,000 workers were employed, turning out 100,000 units per month, at the Fukaya works. Early this year the production volume reached 150,000 units, while the workforce had been cut to 800 people. Nambu says that within three or four years "brain workers" only will be needed, for maintenance and checking, and FA systems alone will turn out the same volume of TV units as at present.

Roy Garner

Word processors giving women a bigger role in office life

Automation threat to man at top

WHEN A. F. T. Finnerty, president of Manpower Japan Incorporated, jokingly suggested to a group of visiting company directors recently that, in addition to meeting their requirements for computer and word processor-trained personnel, perhaps his company should run a course on computerised business exclusively for company presidents, the response he received came as quite a shock.

Almost in chorus, the assembled directors voiced their concern that they should be allowed to join the first study group. Such incidents reveal the important impact which office automation (O/A) is having in the Japanese business world, and in particular its effect upon the traditional skills required for management.

Large numbers of executive level businessmen are coming to the painful realisation that staff members far more junior than themselves often have a superior grasp of the current state of the company's business activities, and the manner in which it is being handled, simply as a result of their proficiency in the use of the advanced data processing equipment which is increasingly being installed.

The "computer illiteracy" of many senior executives often creates a serious communications gap, fearfully contemplated, between them and their better informed subordinates and, though they are at pains to conceal the fact, this often greatly erodes their effectiveness.

Further evidence of this undermining of the traditional forms of office communication comes from the Wako Economic Research Institute, which reports that in the first five months of this year the number of cases of a change of president among companies listed on the Tokyo Stock Exchange reached a record 172.

The reason most often quoted for the change was the inability of the older executives to keep abreast of modern technology.

The problem lies not only in the necessity of having a familiarity with the role of data processing in the area of direct management, but also in understanding the challenges and opportunities available in new high-technology markets.

But while O/A is closing the doors for some, new openings are emerging for others. For women in Japan, office life is normally restricted to a rigid and uninspiring formula which presupposes an early departure from the company for marriage in the mid-20s and rarely includes any important role in the company's activities.

The arrival of O/A, and in particular the word-processor, has suddenly meant that women in the office are increasingly recognised as having a far more important role to play than that of the "office flowers" of the past.

In Finnerty's words, O/A "has given Japanese women a marvellous boost . . . a sense of self-importance." In the increasingly common situation where it is a woman who is speedily manipulating key information on the company's word-processor, while her boss looks on not even knowing where the switch is, the former walks around "with her nose at least three cm higher," he says.

Zero demand

Finnerty stresses that in data processing work it is skills alone which now matter, and marital status or age are becoming increasingly irrelevant.

Only two years ago, Manpower Japan Inc. was experiencing virtually zero demand for women with word-processor skills. Demand is now about 25 to 30 women per day, in the Tokyo/Yokohama area, well above the level of 15 women per day completing the company's training programmes; and companies are asking for "ever-increasingly skilled personnel."

Despite new opportunities for women on some fronts, however, O/A is jeopardising their livelihood on another, through the rationalisation of staff levels which more efficient forms of automated office organisation make possible.

A survey of the effects of computerisation upon employment in the electric industry, conducted last October by the All Japan Federation of Electric Machine Workers Unions, found that 57 per cent of a sample of 255 companies had witnessed a drop in the number of employees assigned to computer supported sections. The suspension of new recruitment was also seen as the cause of a sharp drop in the total number of full-time women workers.

Another study, by the Economic Planning Agency, conducted in January, found that 4.6 per cent of the sample of 1,038 corporations expected a "sizeable cut" in the workforce as a result of O/A introduction, while 63.1 per cent anticipated some decline.

Both studies concluded that workers in their 50s or over were becoming increasingly hard to employ in the new O/A environment and found that the highest number of redundancies were also to be found in this age bracket.

The July 1983 O/A report by the Nippon Administrative Management Association (NAMA) also alludes to a polarising of employee profile in the O/A field. Of the 2,500 participants at a major O/A convention in Tokyo, no less than 86 per cent were found to be male, while 78.2 per cent were in the age bracket from 18 to 34 years old. One implication which might be drawn from this is that while women are still seen as vital in the operation of the new O/A equipment, the choice of that equipment remains a male prerogative.

According to a Nippon Administrative Management Association survey in April, the most widely utilised O/A products are public-line facsimiles (77.1 per cent of all respondents), personal computers (67.3 per cent, with an average of 14.4 machines deployed), Japanese word-processors (57.9 per cent) and VTR's (54.7 per cent, with an average of 27.6 units). The NAMA study received replies from 392 medium and large companies across Japan; 56.6 per cent of respondents said they expected to complete their final or ideal system of O/A in the period 1988-1990, against only 5.4 per cent who felt this would be achieved by 1985.

Local Area Networks (LANs), or on-line systems with host computers were widely seen as the ideal O/A system. LANs were especially popular in the personnel or labour departments, while business and sales departments overwhelmingly favoured on-line systems. Less than a fifth of companies (15.8 per cent) planned teleconferencing between main and branch offices, and a tiny 1.17 per cent envisaged the use of international teleconferencing. Voice-message systems also seemed to be slow in catching on, with 32.9 per cent saying they had no plans at present for their introduction.

NAMA's chief researcher, Norikazu Shinozaki, suggests that considerable differences are evident between the patterns of O/A in large organisations, and those of smaller concerns with fewer than 100 employees.

In the former group Shinozaki foresees a growth in the large scale EDP departments from around a third of the workforce now, to approximately 50 per cent in the future. Another 25 per cent would handle some small-scale equipment in their work, while a quarter would handle only non-automated tasks.

In the smaller companies, however, only a fifth of the staff will work manually, the EDP departments will shrink from a half to two-fifths of the total, and the remaining two-fifths of the work force will increasingly function in an automated environment.

Despite Japan's reputation as a centre of high-technology development, the automation of the office is still well behind the level achieved in the U.S.

Complex

The central problems are a continuing lack of attention to office ergonomics, the Japanese penchant for communicating by hand-written messages (which largely explained the popularity of the facsimile unit), and in lengthy meetings, and the continuing paucity of software able both to handle the complex Japanese script and to make automated office work accessible to unskilled staff.

But one problem the Japanese should not face is a shortage of hardware. The Japan Office Machinery Industry Association anticipates the growth of O/A equipment sales will average 30 per cent or above per year, and estimates total sales value will reach Y1,500bn by 1985.

A Labour Ministry study released in August recommended that in face of the changes being brought about in the Japan office world, shorter working hours should be introduced and more training opportunities provided to allow an easier relocation of workers, where it becomes necessary.

R.G.

State in drive to reverse drugs trade deficit

TOSHIHIKO HASEGAWA is 24 years old, a medical student in Tokyo. He has about two years to go before he qualifies and he can hardly wait. Toshihiko reckons he will make at least a million yen ($4,200) in his first month in practice, which will probably be with his father, also a doctor.

But politics are never far, if ever, from the consciousness of Japan's medical fraternity. Toshihiko angrily volunteers that his incipient career is under threat—from the Government and the drug companies. Fellow students bang the bar table in boisterous agreement.

Doctors are probably the most highly paid professional group in Japan. Until recently they formed one of the most powerful political lobbies, a situation which has marginally softened since recent leadership changes at the top of the Japan Medical Association. Their wealth has been secured on the back of a complex, but systematic, web of drug development and pricing that has been largely responsible for a 400 per cent rise in Japan's medical bill since 1971 to an estimated $60bn last year.

Although Western medicines were introduced into Japan round about the time of the *Meiji Restoration in 1868*, and despite a degree of import substitution during World War I, Japan's pharmaceutical industry really took off in the 'sixties, with the introduction of a fully fledged national health insurance system.

"Rising real incomes would have caused a tendency for expenditure on health to rise in any event," says one industry analyst, "but this was accentuated by the new national health insurance system. It has encouraged the prescribing of the more expensive ethical drugs, while insulating the patient from the real cost of treatment."

In 1961 more than 50 per cent of drugs consumed in Japan were sold "over the *counter*" *(OTC)*. Today the OTC share of the market has withered, it is estimated, to around 14 per cent. The losses have been to ethical drugs which are now being prescribed at such a rate that the Government, which paid out some $16bn on ethical drug consumption alone last year is now desperately trying to claw back some of the deficit.

Part of the problem the Government faces is of the state's own making. Japan's pharmaceutical industry is highly fragmented. The 10 biggest producers hold less than 40 per cent of the market, with the rest shared among another 1,800. They are being joined constantly by new competition, encouraged by the fact that if *they develop* a new drug, the system virtually guarantees there's a better price than existing competition. For the doctors and medical institutions moreover, the more expensive the drug prescribed (and usually dispensed by them) the bigger the reward from the state.

The state of course plays no part in the marketing of OTC drugs but it comes into its own in the ethical market, determining first at what price a new *drug can be sold to a patient* —and hence to the state—by measuring its efficacy against a reference product nominated by the applicant. This "therapeutic cost" method ensures that even the most minor improvement in the drug is rewarded by raising its reimbursement (dispensed) price on a scale which supposedly reflects the degree of improvement over the competition.

Reimbursement

The Government has had to draw the line in some cases, however. Major advances have been made recently in injectable antibiotics and when Takeda's Pansporin (cefotiam) was *tested against a reference*, Fujisawa's Cefamezin (cefazolin), in 1980, the required dosage for Pansporin was found to be half of the reference product and should logically have cost twice as much. However Takeda, Japan's biggest drug producer, was given a 61 per cent price premium over its rival.

Securities analysts estimate that manufacturers, on average, sell ethical drugs at around 65 per cent of the market reimbursement price. Wholesalers, who are often by-passed in the distribution system, take another 10 per cent, with the rest going to physicians or institutions.

The Government has tried approaching the inevitable, though not wholly deliberate, alliance between manufacturers and the medical profession from both sides. Reimbursement prices are now regularly revised, mostly downwards. In *1981 a dramatic 18.6 per cent* price cut was imposed on 12,881 ethical drugs.

The demand side is also under attack. In February nominal charges for prescriptions were introduced for elderly patients and these are likely to grow. Since *1979*, new income tax provisions for doctors, which put their allowances on a sliding scale, have been in operation.

There are obvious risks involved in trying to hold down prices in this way. Japanese drug manufacturers are relatively small—partly because of the time involved in developing new drugs but also because the costs involved in marketing a new drug are so large (and not tax deductible) as to *inhibit the growth of any one* manufacturer's product range.

The industry is also relatively easy to enter. There are about 385 companies producing ethical drugs, most of which have made their way by manufacturing generic compounds copied or licensed from Europe and the U.S., on which the margins are much smaller than what might be available on a unique development.

The Government therefore finds itself having to tread care*fully to avoid damaging the* profitability of the companies most deeply involved in original research and development. It is these producers that the authorities want to see grow and spearhead Japan's efforts to become a major exporter of drugs.

Over the past few years the Government has actually discriminated in favour of the R & D companies. Patent laws have been changed to protect products and not processes. Previously even a minor change in the process of manufacturing a compound qualified a company for higher prices.

The change in emphasis appears to be proving effective. Authoritative research shows that some *20 per cent* of the drugs under development in the world now originate in Japan. In 1973 the Japanese share was roughly 1 per cent.

Still Japan runs a trade deficit on drugs with the West, *a condition it is anxious to* reverse. The companies spending heavily on R & D will need to be nurtured *even* further to get the industry on a sound export footing.

Meanwhile, the strains imposed by price cuts are beginning to tell. Manufacturers have shown a determination to protect themselves against any brakes on medical spending. After the big price cuts ordered in 1981, which affected only the reimbursement prices and therefore only the price to the patient, the Japan Pharmaceuticals Manufacturers Association's 78 member companies immediately moved to try to stabilise their prices.

The president of the JPMA reportedly asked manufacturers to be "prudent" about cutting their prices in order to match the reimbursement cuts. That brought an immediate response from the Fair Trade Commission, which argued that even a suggestion of collaboration on prices broke Japanese anti-trust laws. The industry finally gave way last month, though it seems likely that many producers had resorted to heavy discounting anyway.

The affair, however, has probably driven an immovable wedge between the manufacturers and the medical profession, which was, for its own reasons, anxious that manufacturers be not allowed to curb discounting among themselves.

Consolidation

Today, insists one analyst, "the Japanese pharmaceuticals industry has clearly entered a stage of re-organisation and consolidation." Whether this *means that some* smaller R&D companies get swallowed up by domestic, or foreign, competition is unclear. The bigger companies, not all wholly dependent on the drugs market for their revenues (and which have, generally, taken a lead in marketing foreign drugs in Japan) are probably the only ones with the muscle to go abroad on their own.

"Pharmaceutical companies are at a turning point," says a spokesman for Sankyo, Japan's second biggest producer. "A technology intensive industry does not have to be established in Japan. We are going to shift more and more towards exports, particularly where we are strong, in antibiotics and immunology."

Quite whether the twin pillars of more original research and lower prices for the end-product can be reconciled is anybody's guess at present. Tohihiko Hasegawa may find his medicine a different world from the one where his father now travels. "Either the doctors or the patients are going to get squeezed," commented one observer. "They don't export anything."

Peter Bruce

MEDICAL EXPENDITURE AND PHARMACEUTICALS PRODUCTION

	Medical expenditure (Y bn)	Of which treatment for the elderly (per cent)	Pharmaceutical production (Y bn)	Of which: Ethical (per cent)	Of which: OTC (per cent)
1975	6,478	13.4	1,792	81.7	18.3
1976	7,668	14.1	2,162	83.2	16.8
1977	8,569	15.0	2,458	83.7	16.3
1978	10,004	15.9	2,794	84.1	15.9
1979	10,951	16.9	3,042	84.2	15.8
1980	11,981	17.1	3,482	85.5	14.5
1981	12,917	18.0	3,679	85.2	14.8
1982†	13,880	19.4	3,980	85.6	14.4

† Provisional figures.

Source: Ministry of Health.

Strong effort to build up biotechnology

THE GLITTERING promise of the newly-emerging field of biotechnology has been grasped by several of Japan's corporate giants with all the enthusiasm of men drowning in their own surplus petrochemicals.

For these companies in the declining chemical industries, which include major concerns such as Mitsubishi, Sumitomo and Asahi, the new challenge of biotechnology appears no less than a potential 11th-hour reprieve from a drift into obsolescence, and the current competitive dynamism in the already densely-populated market reflects their determination not to miss out on the lifeline.

For Japan's pharmaceutical companies, biotech advances offer the chance to slash production costs, further diversify their product range and more readily meet the challenge of the increasing domestic demand for their goods posed by Japan's rapidly ageing population. In addition, great social and commercial benefits appear likely with the arrival of new drug breakthroughs, which could before long even include more effective cancer treatments.

Many of the nation's food and beverage manufacturers are also very excited at the possibilities of the new field, having discovered that their traditional skills in fermentation technology, developed over centuries in the making of such products as soyabean paste, soy sauce and the Japanese rice wine "sake," offer them a gift-wrapped lead in an area of expertise which is at the very *core of many* of the principal biotechnological processes.

Companies in this category notably include food manufacturers Kyowa Hakko Kogyo Company (probably Japan's number one company in the biotech field), Ajinomoto, and Suntory, the major distiller and beverage maker.

With such a range of potential benefits in the offing, it is little wonder that biotechnology is variously described in Japan, these days, as the "new frontier" or "next industrial revolution," in rather the same way as computers and semiconductors were once held in awe.

Equally predictable has been the government's enthusiastic, if somewhat belated, moves to give order and direction to the development work in progress across the country. The term "biotechnology" is one which confuses many people, and the definition offered by Japan's Ministry of International Trade and Industry (MITI) of "a technology involving the direct utilisation of living organisms and their functions, as well as mimicry of their functions, for the conversion of substances" leaves much to the imagination.

MITI, however, laid down some bold guidelines for biotech research and development in a 1981 initiative. Under the MITI plan, in which biotech was designated as one of *Japan's vital future industries*, a Y31bn, 10-year research programme was launched, and three target areas for growth were defined. These were bioreactors for industrial use, large-scale cell cultivation for the production of such substances as hormones and proteins, and recombinant DNA gene-splicing techniques.

Investment

The funds for research are *to be shared between 13 com*panies and one private research institute.

Many other government agencies are also involved in biotechnology including the Japanese Health Ministry, which started research on the cancer-fighting drug, Interferon, in 1978. The Science and Technology Agency is also involved in the Interferon field, and gave a Y1.75bn grant to two companies, Toray and Green Cross in 1980.

*But the bulk of the invest*ment is still in the hands of private industry with a total outlay of about Y47bn per year, and domestic competition is growing increasingly fierce. Mitsubishi Chemical, for example, now devotes an annual budget of Y2bn to the biotech research being carried out at the company's Institute of Life Science subsidiary, and has also recently signed a joint-venture agreement with the entrepreneurial U.S. company Genentech Inc. initially for the mass production of albumin.

Kyowa Hakko Kogyo spent about Y800m on biotech R&D. in 1981, and fully 70 per cent of its earnings now come from fields outside its original alcoholic beverages.

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Glyn Genin

Farmer feeding a cow with beer to produce highly-prized Wadakin beef, shown (right) on sale in a Matsusaka butcher's shop—at up to £35 a pound.

Farming: arguments against reform

ANY ANALYSIS of Japan's agriculture instantly becomes a labyrinth of contradictions. On paper, the farm sector appears an almost textbook case of inefficiency and protection, as frustrated foreign governments, led by the U.S., never tire of arguing. Yet, inside Japan, there is something very close to a national consensus that, no matter how subsidised and expensive its products, farming serves an economic, social and political purpose that militates against radical reform.

Interestingly, though the overall picture is patchy, agriculture is currently doing rather better than in recent years. The midsummer outlook from the Ministry of Agriculture, Forestry and Fisheries projects a 5 per cent increase in farm income in the current fiscal year, compared with a drop of just 1 per cent in 1982 compared with 1981.

A major factor is an estimated 7 per cent growth in rice production, designed by the Government to compensate for the poor harvest of 1982.

Last winter, there was even a small and probably illusory increase in the number of farmers in Japan, though this seems to have been as much a result of the recession in industry as any rediscovery of the lure of the land. According to the Ministry, the number of farm households at the start of this year stood at 4.52m, 46,000 fewer than a year earlier, while the total agricultural workforce amounted to 6.46m.

Deceptive

This still constitutes more than 10 per cent of the labour force, high by the standards of comparable industrialised countries, though the figures in Japan are deceptive. The Ministry also reported that, last year, more than 70 per cent of those classified as farmers earned more money from non-farm employment than they did from the land.

Nevertheless, lumping all income and government subsidies together, and bearing in mind that farm families are bigger than their city counterparts, the average Japanese farm household last year earned Y6m ($25,000), compared with Y4.7m in wage earning households.

Neither numbers, which are going down in any case, nor income can explain how it is that Japanese farmers enjoy such a remarkably congenial relationship not only with the national government but even with society as a whole.

In part the secret is political: the Japanese electoral system, largely unreformed in the past 40 years, gives undue weight to the rural vote (a successful candidate in an urban district may need six times the votes required in the countryside). No political party has cultivated the rural vote more effectively than the conservative Liberal Democratic Party, which has enjoyed power for the best part of those 40 years.

Thus, in a revealing little incident this year, the government tried to hold the price of rice steady; the farmers leaned a little and the government gave, authorising a 1.75 per cent rise in the producer price.

It so happens that the domestic price of rice is roughly four times the world level (the Japanese are also consuming less of it). A wide range of agricultural produce in Japan, though of high quality, is extremely expensive by international standards, something which an increasingly sophisticated Japanese consumer is perfectly aware of.

Yet the consumers do not demand cheaper foreign produce. Surveys suggest that 80 per cent of Japanese do not mind paying higher prices if it means that national security of food supply can be guaranteed—and this is an integral part of government policy. Additionally, many Japanese have their roots—which they treasure—in the countryside. Preserving the small family operation (average size a little over one hectare, average livestock 6.5 head of cattle) matters.

It is also true that on a yield-per-unit basis Japanese farming is productive. The country's terrain, the northern island of Hokkaido excepted, also militates against large-scale farming. Farming, as traditionally and currently practised, is labour intensive, unlike its ultra-efficient American counterpart, and thus an invaluable employment-creating mechanism in a nation which prefers to see people in work.

Thus it seems that Japan is prepared to bear the cost of keeping agriculture as it is, regardless of the drain on the national budget and regardless of the increasing pressures for liberalised imports from outside, principally the U.S.

Demand

This does not mean that Japan is independent of foreign food: the country's import bill for agricultural produce is exceeded only by that for fuel. Nor is protection universally applied, since the decreasing role in the overall economy played by agriculture since the industrial explosion began 30 years ago has created a demand that domestic farming cannot meet. Today, only 22 major agricultural and fishing items are protected in varying degrees.

Japanese farmers, and their powerful lobbies, do not hesitate to point to the destruction of agricultural sectors that has stemmed from the liberalisation of imports—to the lemon industry in the early 1970s, for example.

They also believe that the U.S. is now taking dead aim at the heart of what is left of Japanese agriculture. If beef and the remaining citrus fruit (not to mention tobacco) fall to the American onslaught, surely rice would be the last exposed domino.

The farm lobby also maintains, taking direct aim across the Pacific, that the U.S. would not necessarily be the principal beneficiary of blanket liberalisation. It estimates that the U.S. might gain an additional $500-800m a year (it sold $5.5bn to Japan last year), but a small part of the overall $18bn bilateral trade deficit. It might find itself being beaten in Japanese markets by lower cost Australian beef, Brazilian orange juice and Israeli and South African citrus fruit.

For purely political reasons it may be necessary for the Japanese Government to give a little as negotiations with the U.S. over agriculture continue. The extent of Japan's concessions will be closely watched and, if necessary, vigorously opposed. The farm lobby reckons it can easily put together a parliamentary majority to block changes requiring legislation and its boast is not to be taken lightly.

As it stands, the official government blueprint for agricultural development in the 1980s calls for enhanced productivity, preservation of farm incomes and the maintenance of food self-sufficiency at current levels. This is a recipe for retaining the status quo and there do not seem to be many in Japan who wish it otherwise.

Jurek Martin

Cultured pearls, Japan's most famous export, at a Kobe pearl factory. The pearls are produced in a range of colours, from pure white to steel black.

Biotechnology effort

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Kyowa's prowess in the pharmaceutical field dates back to 1956, when its researchers brought forth a bacteria capable of producing L-Glumatic acid, a fundamental requirement in the production of antibiotics, enzymes and amino-acids.

In the latter field a further advance came when Kyowa discovered a way to produce one of the most important amino-acids, L-Lysine, through a fermentation process. Amino-acids production is also the forte of Ajinomoto, a company which led the way in production of the nitrogenous organic compounds by a genetic engineering technique which centres on cell-fusion.

Suntory, best known for its whiskies, is also gaining a name in the biotech race, which it entered seriously only three years ago. The company now has more than 120 specialists in its research labs—most of whom are hastily-recruited returnees from venture businesses abroad, where they previously had to go to find work—working on genetics, cell immunology and plant molecular biology.

Suntory's progress is reflected in a deal it signed in June this year with Biogen N.V. of the Netherlands, under which Suntory will exchange its gene-insertion techniques for Biogen's TNF (tumor necrosis factor), an anti-cancer sugar protein.

International exchanges, in fact, are likely to be a strong characteristic of the biotech business, since Japan has many skills, especially in the fermentation area, much sought after abroad, while the country as a whole still lags as much as four or five years behind its overseas competitors in biotech generally, and is thus very willing to import the technology necessary to "seed" research ventures.

Of the over 200 companies engaged in biotech (according to MITI figures), probably the most generally well known at present is the Hayashibara Biochemical Laboratories, where work on the production of the much sought-after anti-cancer drugs Interferon and carcino-breaking factor (CBF) is under way in a new research centre which opened last December.

Hayashibara has developed a new way of producing Interferon by the use of hamsters. In a painless process, human cancer cells are injected under the hamsters' skin and Interferon is then produced naturally in an immunological reaction to the foreign bodies.

To show the positive human benefits of biotech research, such as increased food production and progress in medicine, as a counter to its still poor public image as work involving the dangerous manipulation of nature, is seen as an important task by Japanese scientists, and it is only very recently that the Government has eased up slightly on its extremely severe regulations on genetic engineering.

As both the real safety issues, and the potential business and social opportunities, presented by biotech become clearer, both government and industry in Japan appear set to make a major national effort in the field.

Roy Garner

The visitor is soon made to feel at home by the hospitality of his hosts

Much to savour in a friendly land

MANY BUSINESS visitors to Japan will find their working and social time pretty well monopolised by their Japanese counterparts, who can be indefatigable hosts. But whether under guidance or venturing off alone, the visitor should not be daunted by the country and its surface barriers of an impenetrable language and strange mores. Japan rewards the patient explorer. What follows is a personal handbook of assorted tips for getting along and getting around.

Arriving

It is a great pity that, having flown many hours to get to Tokyo, the traveller must be resigned to at least two more before reaching a final destination. Narita Airport is the soul of efficiency (baggage pick-up, customs and immigration clearance can be accomplished in 20 minutes) but it is 45 miles from the capital. Being met by car is nice, but traffic approaching Tokyo can be appalling; a taxi can cost Y15,000 ($60) and be similarly subject to congestion.

Best bet is the airport bus (Y2,500) which leaves directly from the terminal and is so advantageous if travelling with *heavy luggage. Most buses go* to Tokyo City Air Terminal in east-central Tokyo, from which a taxi must be taken; some go directly to the major hotels.

A cheaper alternative, faster if road traffic is bad, is the Skyliner train (Y1,500), requiring a five-minute bus ride to the station and a one-hour ride to Keisei Ueno Station in north-central Tokyo, then a taxi.

Don't cut departures too fine, what with travelling time to Narita and rigorous security checks at the airport. Narita has above average duty-free shopping and, by international standards, definitely superior restaurants.

Where to stay

Tokyo, and most of the major cities, have sufficient top-quality modern hotels, though occupancy rates are high. Good rooms will run to $100 and more per night. There cannot be many better hotels in the world than the Okura, whose understated elegance and service, exquisitely tailored to the business visitor's needs, are a 24 carat delight (its sushi bar, though not cheap, is not to be missed).

Other ranking hotels include the Imperial, no longer the Frank Lloyd Wright gem, but recently expanded and remodelled; the Palace, with its fine views over the Emperor's grounds, the old Tokyo Hilton, the Keio and the Hyatt in Shinjuku and the several Prince Hotels, listed here in a rough order of preference.

The New Otani is the biggest hotel in Asia (2,100 rooms) and sometimes oppressively crowded, though its restaurants are good and its traditional Japanese garden lovely.

Lower down the scale are countless more modest establishments and more typical Japanese businessmen's hotels, in which rooms do not permit cat-swinging. The Fairmont, near the Yasukuni Shrine, is slightly scruffy, but confortable and incomparably located for *cherry blossom viewing.* The Diamond, next to the British Embassy, is reckoned functional and convenient. Rooms are in the Y10,000 range.

If travelling outside big cities, a visit to a ryokan, classic Japanese inn, is worthwhile. Charges, which include traditional baths and meals served in the tatami-matted room in which you sleep, are generally per person and can easily exceed *Y15,000 in a quality* ryokan or be as low as Y2,000-Y3,000 in a humble minshuku (where many people may share a room).

The bigger hotels are excellent places for people-watching. This is especially so at the height of the wedding seasons in spring and autumn when lobbies are wall-to-wall with guests in the most elaborate kimonos.

It also needs repeating that the service in Japanese hotels is, by Western standards at any rate, greatly superior. There *simply are no endless waits for* room service at peak ordering periods—no small mercy.

Getting around

This will often be done in one of the large black limousines (one called, believe it or not, a Cedric) of which Japanese companies appear to have a limitless supply. Taxis are ubiquitous, except for 11.30 to 12 at night when bar patrons and hostesses are rushing to catch the last trains home to the suburbs.

Two red dots on the left of the windscreen means a taxi is free, two green ones that it is occupied. Rates are a little on the high side, but remember there is no tipping. If unsure of the exact destination, ask the hotel clerk to write instructions in Japanese to give to the driver.

Tokyo's Tube system is *among the best in the world.* It is cheap (Y100-Y120 goes a long way), clean, safe, a a bit crowded, and increasingly comprehensible to the foreigner, with the addition of many new signs in English or "romaji." The only snag is that most stations have many exits, and choosing the wrong one can lead to a long walk. They also have many, many stairs.

Inter-city travel is best accomplished by train. The marvel about the Shinkansen (Bullet trains) really is no longer their speed; it certainly is not their charm, for they are only functional with awful food (buy an obento, or lunch box, *from a station stall for the* journey). Nor is it economy, for the 500-kilometre, three-hour Tokyo-Kyoto run costs Y10,000-Y15,000, for reserved and Green Car (de luxe) classes.

What does amaze is that there are so many of them—every 10 minutes, sometimes less—and that they really all do run on time.

Flying is expensive and car rental simply not worth it, because of the prevailing traffic congestion, not to mention frequent, costly tolls and map and sign reading problems. It is one *of the strange paradoxes of* Japan that it produces some of the best cars in the world but has one of the world's worst road systems; what ought to be an hour's run to a beach outside Tokyo has been known to take five.

Eating out

This entire survey could easily have been devoted to this topic alone, perhaps indeed it should have been. Simply to save space, we will ignore all Western food, except to say that the Japanese are excellent at adapting to the form but not always the substance of foreign cooking. The more robust European cuisines tend to be too blandly presented, as does Chinese, though, perversely, there are some good Indian restaurants (both branches of Moti in Akasaka and Roppongi are excellent) and one Thai *hole-in-the-wall (the Chiang Mai* in Yurakucho) that truly opens the pores.

The visitor's eating plans may depend largely on whether or not the Japanese business contact is playing host. Partly for reasons of form, partly out of conviction, many Japanese will express surprise if the guest shows a preference for Japanese cuisine. This can mean that unless the foreigner makes his wishes known, he may end up in a Western restaurant (which secretly the Japanese want sometimes because they can tuck into a good steak).

But, assuming this ritualistic hurdle is overcome, it is then wise simply to put yourself into the hands of the host who, in Tokyo, a city of at least 350,000 restaurants, will know places that the casual visitor cannot. The range, and cost, can be enormous. An evening at Fukudaya—a temple of traditional elegance much beloved of the current Prime Minister tucked away next to the new Akasaka Prince hotel, can—with full geisha scene—run to Y70-80,000 a head and will be memorable.

However, equally exquisite Japanese food can be had for a *lot less. Many of the restaurants* are deceptively humble, insignificant from the outside, small, perhaps running to no more than a counter, inside. Some will have traditional tatami rooms for private dining, *but again be spare almost to* the point of austerity.

Do not feel slighted for what the best Japanese establishments lack in flock wallpaper, plush banquettes, crockery and napery they more than make up *for in the freshness, quality and* presentation of the food. And the Japanese do know about their food: if a business contact suggests such and such a restaurant because it has the freshest in-season bamboo shoots or a mushroom that grows only for five weeks a year on a south-west facing slope in a distant prefecture, don't quibble; he knows and you will be honoured and delighted.

Some recommendations (a personal, random and hopelessly incomplete list):

Buddhist (vegetarian)—Close to the best and certainly the most imaginatively and beautifully presented meal yet consumed in Japan was found at Muryoan, round the corner from the American embassy in Azabu. A new establishment; lovely place, 13 courses, and sheer wonderment at the end that not one was either meat or *fish; a genuine experience.* The owner/chef worked in Italy and speaks good Italian if explanations are required; not cheap.

Sushi/sashimi (raw fish)—Almost any of the tiny places in Tsukiji, the fish market district but a 10 minute walk from the heart of Ginza. Go early, most are closed by 8 pm.

The sushi bar in the lower level of the Okura Hotel.

Tempura (fish and veg in batter)—Hayashi, tiny place in Nihombashi, closes early. Vohsin, round the corner from the Roi Building, a Roppongi landmark. Hisago, with branches in Akasaka, near Tokyo Tower, and round the corner from my house in Hira kawache.

Sukiyaki/shabu-shabu (thinly-sliced beef cooked in broth)—Zakaru, opposite front gate of U.S. Embassy, roomy, good quality and service. The same owner also operates Shabusen, in the basement under the south-east corner of the Ginza crossing. Noisy, cheery and exceptionally good value.

Soba/udon (noodles) — The best Sunday lunch in Tokyo, for food and people watching, is to be had at Yabusoba in Kanda, the book district; very traditional. Notice the exquisite *public behaviour of children* out for a treat with well-heeled Japanese parents. The food is delicious, in very attractive surroundings; expect to wait, but not long.

Soba and Udon places, to be found at every corner, probably offer the best value for money: Y600 can buy a big lunch.

Yakitori (charcoal grilled meat and veg, on a stick)—Nanbantei is an excellent chain, with lively branches in Roppongi and Shibuya and elsewhere. Good values set menu. Hayashi, in Nishi-ginza, near the Kabukiza, is do-it-yourself round an open fire and a lot of fun, though not in hot weather. *Another branch, in Akasaka,* is smarter and offers sensational thinly-sliced duck breasts. Daimatsuya, in Ginza, is in at least the same league.

Fish, etc.—Restaurants which do well often duplicate themselves. Neboke, whose cuisine derives from the southern island of Kyushu, has a catholic menu, but excels in assorted fish dishes. Try the tuna, served essentially raw but seared *briefly* over charcoal fire, with, unusually for Japan, a garlic-ridden sauce. The Shibuya branch is first rate.

There is an excellent kabayaki (eel) cafe in the basement of the New Otani hotel. Totoya Vashin in Akasaka is a classic, small Japanese fish restaurant of impeccable quality. Sitting at the counter and observing the art of the well-prepared Japanese chef is best.

Receptions

These are very much a Japanese corporate institution and tend to replace the bibulous Western working lunch. It is important to remember that *there will normally be speeches* early in the proceedings, before which it is generally considered impolite to attack the groaning board of hors d'oeuvres and other delicacies. Formalities over, however, it is advisable to grab a plate and fill it early, for locusts cannot compare with a hungry Japanese executive. Business conversations may then proceed *normally.*

Shopping

Japan is a place for quality rather than outright bargains. Akihabara, the discount electric and electronic shopping district, is worth a visit but is certainly more expensive than Hong Kong and Taiwan not to mention 42nd Street in New York, and possibly London.

The Oriental Bazaar in *Omotesando attracts a lot of* foreigners but should not be overlooked. Overcome prejudice and buy a secondhand kimono, still immaculate in most cases and custom-tailored and at a fraction of the cost of a new one.

Nearby is the Japan Traditional Craft Centre (at Gaienmae) which has often super pottery, lacquerware woodcarvings and traditional dolls and toys at very reasonable prices.

In Ginza, Mikimoto, the pearl emporium, is good for at least a browse and maybe a purchase, as is Wako, virtually next door, for clocks, watches and things.

The best experience, however, is to spend an hour or two at one of the bigger department stores (Takashimaya, Matsuya, Matsuzakaya, Keio, for example). Always take in the basement food halls.

Clubs

As noted, the Japanese businessman eats dinner early; he then may or may not go drinking. If he does he may well invite his foreign guest to his private club (some are to all intents and purposes corporate clubs where executives of different levels can let their hair down a bit, no questions asked on the morrow). This is *where the Japanese business-*man keeps his own bottle of whisky — in fact he may use several such establishments.

Again, appearances can be deceptive. The clubs probably will be small, artificially plush, with a lot of young hostesses, almost invariably there strictly for the conversation and cheery entertainment they provide at the table, not elsewhere. More and more often there will be a karaoke machine, which provides the background music for singing. This is becoming a national vocation (Japanese men do have rather nice light tenors) and the foreign guest must at least be prepared to participate. Exhaustive research reveals that many karaoke machines are programmed for "San Francisco" and "Danny Boy."

There tends to be an air of considerable, if forced, gaiety to the clubs, probably because the Japanese, whether selling computers or having fun, tend to do things wholeheartedly. Anglo-Saxon reticence, therefore, is not always appropriate.

Generally most drinks are available in restaurants and clubs. Wine is expensive, which makes beer, sake or whisky both tactful and economic alternatives. Japanese beer is fine (try Yebisu, if obtainable), sake is variable and local whisky a matter of debate — it tastes and looks like the real Scotch, but even one glass can release the hounds of hell behind the temples the following morning.

Conclusions

Amidst all this, and much more, one fact, easily forgotten, must be faithfully reported. Japan is an early closing country. It is possible to get a drink, and much else, all night in Tokyo night spots such as Roppangi and Shinjuku, but for quality in entertainment reckon to go early.

The last movies, theatre, concerts and sporting activities generally begin no later than 6.30 pm: do not expect to eat at the best restaurants much after 8 pm.

Also remember to carry a fair amount of cash around. It is perfectly safe to do so and, outside the more Western-oriented establishments, a lot *more useful than credit cards* (this is doubly true outside the major metropolitan areas).

But don't tip. The providing of a service in Japan is an honourable profession in which no pecuniary reward is sought from the recipient.

Though the language is obviously a barrier, it is not insuperable. Remember that, since the war, all Japanese children have been obliged to take English for six years minimum at school. The Japanese tend not to speak it well (partly because they have been taught mostly by Japanese) but their comprehension is greater than you might suppose and many welcome the opportunity to try out their English on the visitor.

Jurek Martin